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WORLD WAR II
PARATROOPERS IN COMBAT

EDITOR JULIE GUARD

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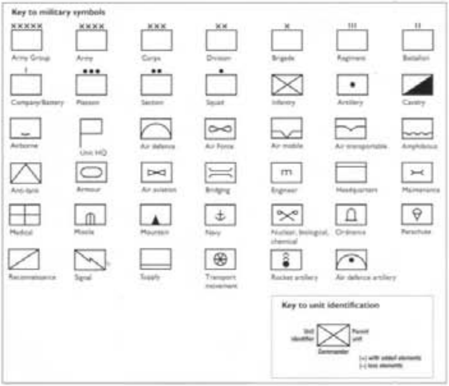

Key to military symbols

XXXXX
Army Group
XXXX
Army
XXX
Corps
XX
Division
X
Brigade
III
Regiment
II
Battalion
I
Company/Battery
●●●
Platoon
●●
Section
●
Squad
Infantry
Artillery
Cavalry
Airborne
Unit HQ
Air defence
Air Force
Air mobile
Air transportable
Amphibious
Anti-tank
Armour
Air aviation
Bridging
Engineer
Headquarters
Maintenance
Medical
Missile
Mountain
Navy
Nuclear, biological, chemical
Ordnance
Parachute
Reconnaissance
Signal
Supply
Transport movement
Rocket artillery
Air defence artillery

Key to unit identification

Unit identifier
Parent unit
Commander
(+) with added elements
(–) less elements

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INTRODUCTION: AIRBORNE WARFARE TACTICS

Gordon L. Rottman

World War II saw the introduction of a new means of warfare, providing an army with the capability to exploit the enemy's 'vertical flank'. Large combat units could be inserted behind enemy lines in a short time via parachute, glider and transport aircraft. As with any new form of warfare, there were tragic mistakes as well as resounding successes. There was much to learn, and new capabilities continued to be introduced throughout the war.

Airborne operations offer a number of advantages to the army employing them. They enable the attacker to carry out a vertical envelopment, bypassing the front line or positions with protected flanks. In the same manner he can surmount major obstacles by 'bounding' over rivers, mountains and even oceans. Airborne forces cannot always accomplish these missions unless supported by a conventional ground force; but a supporting airborne operation can reduce the size of the necessary ground assault force, and distract the defenders enough to reduce the resistance it will encounter.

Airborne operations can be launched from within the depth of the attacker's zone, providing extraordinary speed and offering opportunities for surprise attacks throughout the enemy's rear areas. There are so many possible objectives and scenarios for airborne attacks that no defender can effectively forestall them all. An assessment of the enemy's positioning of reserves, air defences, anti-airborne reaction forces, and dispersal of rear service organizations and headquarters provides the airborne force with numerous options to counter the enemy's defensive plans. Airborne units can support the attack by deploying as reinforcements, whether parachuted or air-landed, without the need for slow sea or road-bound truck transport.

The psychological effects of airborne operations, both small and large, cannot be discounted. At all levels of command consideration must be given to the airborne threat and measures to counter it. The menace of airborne raiders or a full invasion affects commanders and troops alike. Resources are expended on defences for rear area

German paratroops land during the invasion of Crete. (Getty Images)

General Dwight D. Eisenhower, Supreme Commander Allied Expeditionary Forces, visits paratroopers of the US 101st Airborne Division at Greenham Common airfield just hours before their take-off on the night of 5 June 1944 – the eve of D-Day.

installations, units are assigned to secure possible airborne objectives, and counter-airborne reaction forces are deployed. These all detract from the reserves available to back front-line units under direct assault from the sea or land. One of the arguments against airborne operations is the possibility that airborne forces may be widely scattered in small elements under limited tactical control; but this can just as often be a benefit. The night drops in Sicily and Normandy were characterized by wide scattering; small groups of airborne soldiers collected together from different units and marched towards the sound of the guns, and while initially disorganized, most missions and objectives were achieved. This scattering created a greater problem for the Germans than had been anticipated. Their rear service and command and control networks were disrupted at the most critical time – when the amphibious assault came ashore – and reports of paratroop landings from widely dispersed areas persuaded them that the airborne landings were in greater strength than they actually were; they felt that they were under attack everywhere. The mere threat of paratroopers has often led to extended alerts and the establishment of unnecessary defences; this occurred in the Philippines, Hawaii, Burma and elsewhere in response to fears of Japanese paratroopers who never materialized.

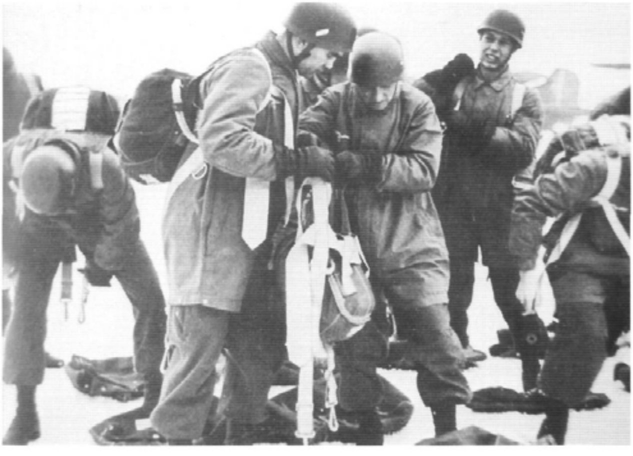
Obviously, airborne forces are primarily an offensive asset, but they can also be used defensively. They can reinforce cut-off ground units, conduct diversionary and harassing raids in the enemy's rear, and aid counter-attacks by attacking objectives immediately behind enemy lines.

However, despite their great versatility, for airborne operations to achieve success a number of requirements have to be met. The airborne force has to be highly trained, to a level beyond that of the usual conscripted troops. They have to be well equipped, and led by competent, aggressive leaders. Planning requires much time-consuming work, and a great deal of intelligence on enemy forces and capabilities, objectives, terrain and weather. The attacker's air force has to be able to achieve at least local air superiority, not just for the delivery of the airborne force but for some days afterwards, providing close air support, resupply and reinforcement. Airlift crews have to be highly trained, disciplined and integrated into the plan. The validity of night or day drops and air-landings must be realistically appraised and the complications of the former considered. Favourable weather and terrain conditions are critical, as are the relationships and distances between drop zones/landing zones (DZ/LZ) and the objectives.

Designation of airborne forces

Different countries used different designations for the various categories of airborne forces. 'Airborne' itself is generally an umbrella term for all categories of ground forces delivered by air.

In the United States Army 'airborne' was a collective term for air-delivered forces as well as identifying a certain category of troops. The airborne division contained 'parachute', 'glider' and 'airborne' units. The first two were restricted to infantry and field artillery trained for either parachute or glider delivery. Units designated 'airborne' included all other units assigned to airborne divisions. For the most part these combat support and service support units were deliverable by glider and transport aircraft. Some component elements might be parachute-trained, e.g. one or two companies in the airborne engineer battalion



German Fallschirmjäger prepare for a practice jump; note the pale rope static lines stowed on their packs, and the early jump smocks in uncamouflaged drab green. The use of national decals on the M1938 helmet probably dates this picture to before April 1940. There were many similarities between the parachuting equipment of different countries, with the emphasis on streamlining the jumper's silhouette to avoid snagging or tangling in the deploying suspension lines, and on securing equipment during the shocks of parachute opening and landing. Special helmets, smocks and boots were prized by the troops as marks of their elite status.

which would be detailed to the parachute regiments. Non-divisional units designated 'airborne' included airborne aviation engineer and AA artillery battalions; these were not parachute-trained as is sometimes assumed, but were air-deliverable by transports and, in theory, gliders. The term 'air-transportable' referred to conventional units trained for mass movement by transport aircraft. Such units were not designated as such but merely received the training, and if so deployed would leave heavy equipment behind. US Marine Corps parachute units were designated, for example, 1st Parachute Battalion. (The term 'paramarine' was not official and was frowned upon, as it implied to the pedantic that such troops were only 'half-marines'.)

The British Army used 'airborne' as an umbrella term, in practice embracing all the units of what became the 1st and 6th Airborne Divisions and some separate units. However, all units assigned to those divisions were designated either 'parachute' or 'air-landing', the latter being glider-trained. Within the division only the two parachute brigade headquarters, six infantry battalions, and later the brigade engineer squadrons and field ambulances, were designated 'parachute'; other divisional units were designated 'airborne division' or 'air-landing'.

In Germany, Wehrmacht airborne units were collectively known as *Fallschirm- und Luftlandetruppen* (parachute and air-landing troops); the *Fallschirmtruppen* were assigned to the Luftwaffe (Air Force) and the *Luftlandetruppen* to the Heer (Army).[1] Within the Fallschirmjäger Division (FJD; parachute rifle division) only the three parachute infantry regiments were designated Fallschirmjäger; all other units were prefixed with *Fallschirm-* (parachute-). All units were parachute-trained and could also be landed by glider if necessary. One German unit was specifically glider-trained – 1st Luftlandesturm Regiment (1st Airlanding Assault Regiment), but it was also parachute-trained. The army converted two infantry divisions into air-landing units, 22nd and 91st Infantry (Luftland) Divisions. Later in the war numerous Luftwaffe ground combat units were designated 'Fallschirm-' for reasons of prestige, but few of the troops were in fact parachute-trained.

Origins

Fantasies of airborne troops descending on the enemy date back to the 18th century. In World War I, the US considered a proposal to drop an infantry division from bombers behind German lines if the war had continued. In the 1920s and early 1930s several experiments were undertaken dropping small groups of parachutists, but these were mere demonstrations of the potential for exploiting an enemy's 'aerial flank'. Many officers were excited by the emerging possibilities of airpower as new aircraft were developed and flying records were constantly broken. Several factors delayed the development of airborne forces, however, both practical and cultural: the limited capabilities of aircraft and parachutes, and the lack of funding and vision.

The true dawn of airborne warfare came with the first large-scale movements of troops by transport aircraft in the 1930s. This less radical means of rapidly deploying troops –

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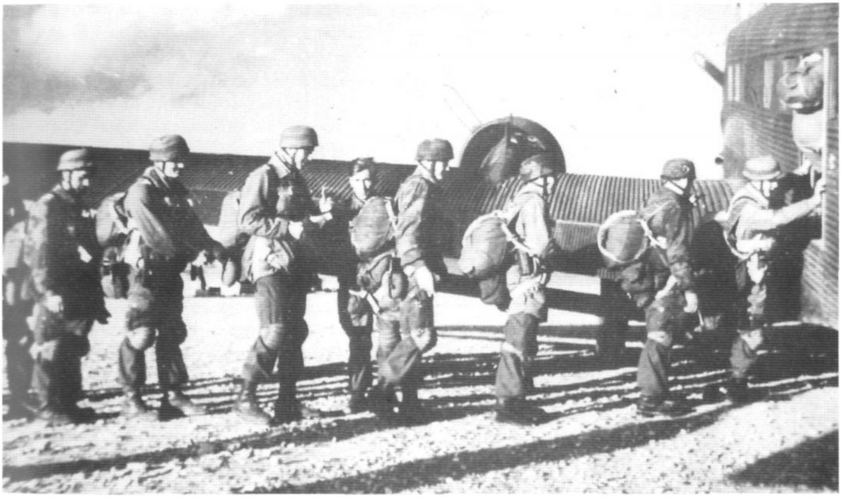
[1] *The army organized the Schwere Fallschirm Infanterie Kompanie in 1937, and expanded it into the Fallschirm Infanterie Bataillon in 1938, but it was reassigned to the Luftwaffe in 1939.*

when compared to dropping them by parachute or crash-landing them in gliders – allowed a more widespread recognition of its potential. In 1931 the US Army airlifted an artillery battery coast to coast across the isthmus of Panama; two years later this exercise was repeated with an artillery battalion. The following year a small infantry force was air-landed behind 'enemy' lines during an exercise in Delaware. In 1923 Britain had airlifted troops in Iraq to put down a tribal rebellion, and in 1932 flew a battalion from Egypt to Iraq when trouble broke out again. The 1932–35 Gran Chaco War between Bolivia and Paraguay saw German Junkers Ju 52 airliners used as military transports by the former; and France and Italy also experimented with airlifting troops. The Soviets experimented on a much larger scale: they formed small motorized air-landing test units in 1931/32, and in 1933 two parachute and two air-landed regiments were employed during the Kiev manoeuvres. In the 1935 manoeuvres more than 8,000 troops were air-landed, with light tanks and trucks, and 3,000 paratroopers were dropped.

At the beginning of August 1936, early in the Spanish Civil War, an airlift occurred that had genuine strategic implications. The rebel Nationalist forces in Spain were reinforced by flying 800 men of General Franco's African Army from Morocco across the Straits of Gibraltar aboard German-provided Junkers, as the spearhead for some 20,000 reinforcements who had arrived by mid-September; about 9,000 of these were flown across (packed as many as 40 men to an aircraft with an official capacity of 17), and the rest came by sea transports.

The delivery of combat troops by glider was a technique little considered before the eve of the war. Many countries – especially Germany, the USSR and Japan – sponsored extensive



Fallschirmjäger boarding a Ju 52 for a training jump. Note that they wear rubber knee pads; Germany was the only country to make wide use of these, due to the forward-leaning landing enforced by the RZ parachute harness. Some countries developed all sorts of protective gear, but a well-secured helmet and good supportive boots were the only things a jumper really needed.

sport glider programmes, mainly to develop future aircraft pilots. The Germans were the first to form glider-delivered infantry units in 1938, followed by the Soviets in 1940. Britain and Japan established glider units in late 1941 and the US in 1942.

Early doctrine

With the exception of the Soviets, most nations viewed parachutists as raiders and saboteurs employed in small units. This short-sightedness is understandable given the limited capabilities of aircraft, and the many command, control and logistical complexities of operating larger units behind enemy lines. The capability did exist to insert small groups of raiders, who could carry sufficient ammunition and rations to make themselves a nuisance for a few days; but the value of such missions was questionable – the comparatively light damage inflicted on the enemy might not be worth the effort. However, sustaining a larger unit through aerial resupply would be difficult, especially if they were to become engaged in direct combat – as opposed to guerrilla-type harassing attacks – and were surrounded by the enemy. Parachute units were also envisaged as conducting behind-the-lines reconnaissance, but reliable long-range radio communications to report timely intelligence information would be the key to this mission.

Other concepts were somewhat more ambitious. They saw battalions delivered by parachute or glider immediately behind enemy lines to seize key features – bridges, airfields, highway intersections, etc. – in order to block enemy reinforcement or to aid the advance of the main ground attack. The air-delivered force would have to be self-sufficient for three to five days, and capable of holding out against whatever the enemy threw at them until relieved by ground forces. Such a force would rely heavily on aviation for fire support in lieu of artillery, as well as for resupply drops; even air evacuation of wounded might be possible.

By 1940, for those with a little vision, a number of ways of employing paratroopers were understood:

1. Severing lines of communication and supply.
2. Opening or closing defiles and crossings and seizing dominating terrain features.
3. Cutting off enemy reserves.
4. Attacking the ground organizations and facilities of enemy air forces.
5. Envelopment from above.
6. Reinforcement of own troops.

Early operations

It is interesting to note how the Germans employed parachute units in their 1940 operations. In Norway in April 1940 a single company was dropped to establish a road block. In the same month in Denmark, three company drops were executed, to secure two airfields and a bridge. In May a company was dropped piecemeal into far northern Norway over 11 days to reinforce beleaguered mountain troops. On 10 May 1940, in Belgium and the Netherlands, much more ambitious operations were undertaken: two regiments conducted multiple jumps ranging from platoon to battalion size. All of these operations – conducted in concert with the Luftlande Division air-landing troops by transports, and

British paras aboard a converted Stirling Mk IV four-engine bomber, still in use as a drop aircraft as late as 1944. Transports converted from bombers often lacked amenities such as seats; while uncomfortable on a long flight, at least the uncluttered fuselage did not impede movement by the heavily encumbered jumpers. The type first provided by the RAF, the obsolete Whitley, required paratroopers to drop through a hole in the floor; a frequent exit mishap called 'ringing the bell' accounted for the number of paras with broken noses.

even by seaplanes landing on a river – had the aim of seizing bridges and airfields. All were successful, and consequently the Allies received an abrupt lesson in the viability of airborne troops. One of the smaller operations, the seizure of the Belgian fortress of Eben Emael by glider-delivered troops, probably did more to capture the imagination of strategists than the larger parachute drops near Rotterdam.

Interestingly, though little notice was taken of it in a world mesmerized by the huge operations in Russia, in July 1941 the Peru–Ecuador Border War broke out. Using Italian-trained paratroopers, Peru secured two airfields by air-landed paratroopers, while others jumped on to and seized a supply base behind Ecuadorian lines, resulting in the rout of Ecuador's border forces.

The first two British parachute operations were raids. One, a platoon-size operation in Italy to destroy the Tragino aqueduct providing water to three seaports, was largely a failure. The other, a company-size operation to obtain technical intelligence on a radar system on the French coast, was a complete success. The first Soviet operational use of paratroopers was in 1939 at the opening of the Winter War against Finland; small diversionary and raiding detachments were dropped behind Finnish lines, but all were quickly wiped out.

Besides the German Luftlande Division, other countries planned to airlift conventional infantry units either to exploit the lodgement of paratroopers or to shift forces rapidly within a theatre of operations. The US planned to train several infantry divisions in this role; they would not be re-organized or receive special equipment, but would simply leave behind all heavy weapons, vehicles and equipment that could not be loaded aboard transports – although the option was available to replace their 105mm howitzers with 75mm weapons. The Soviets planned to airlift parachute units, rather than conventional infantry, as follow-on troops.

It was felt that extremely favourable conditions had to be met for an airborne operation to succeed:

1. Absence of or poorly organized ground defence.
2. Landing in territory where a friendly population would provide information, food and transport.
3. Landing in the rear of a defeated enemy.
4. Good ground and weather conditions.

In reality most later successful airborne operations met few if any of these criteria, although the last factors were highly desirable for success. The shortcomings of airborne forces were recognized. No new concept is without its limitations, but conventional commanders tended to decry airborne operations because on the surface the shortcomings seemed highly detrimental to what was necessary for successful combat operations of any kind. These shortcomings were:

1. The vulnerability of descending jumpers to enemy ground forces.
2. Initial disorganization after landing.
3. Lack of mobility after landing other than by foot.
4. Lack of supporting firepower other than by aircraft.
5. Difficulty of resupply.

It was soon realized that success depended on a number of factors. As already mentioned, the essentials for success included sufficient time for planning, and for marshalling airborne and airlift units; intense coordination with airlift units; and good information on enemy forces in the operational area, terrain and weather conditions, and the details of the objective area. Airborne units could not be committed to ground operations in the meantime, or they simply would not be available when emerging situations demanded their use. Complete surprise was critical, and at least local air superiority was necessary.

Only the Soviets had developed an advanced doctrine to introduce substantial airborne forces into the enemy's rear to support the main ground assault, disrupt his withdrawal, or threaten his open flank. The concept was ambitious, but the limited air transport and other capabilities of the era hampered its implementation. The 1933 special instructions specified that airborne regiments and brigades would be employed against the operational depth of the enemy defence and that tactical airborne operations would be conducted by battalions or companies. Why the Soviets did not employ larger airborne forces from among their 60,000 paratroopers to interdict Finnish supply lines and hamper reinforcement in 1939 is unknown, though it is apparent that they lacked intelligence on enemy dispositions and terrain, and their missions were inappropriate. The principal lesson learned was that airborne units could not be detailed out to conventional tactical commands with the expectation that they would be effectively employed; they needed to be held under the control of the highest echelon of command.

Regardless of the failure of the modest Soviet airborne efforts in Finland, the 1941 Soviet field service regulations for the employment of airborne forces provide a good doctrinal view of their use in the near future:

1. Disruption of enemy command and control and rear area activities by attacking staff organizations.
2. Destruction of communications and blocking the approaches to the front by enemy forces, munitions and supplies.
3. Seizure and destruction of enemy airfields.
4. Securing areas to facilitate the arrival of air-landing troops.
5. Reinforcing encircling forces and mobile formations, and accomplishing missions in the enemy's operational depth.
6. Combat against enemy airborne forces (counter-airborne operations).

Early organization

In the infancy of airborne warfare most nations envisioned airborne units of no more than a battalion or regiment in size – lean, lightly equipped, and provided with minimal service elements. As with any radical concept, traditional military leaders – especially since they were beset by pre-war budget constraints – were reluctant to put much faith in vertical envelopment; few could see the potential for large formations and operations having a strategic influence.

Initially only small experimental units were formed to test existing aircrew emergency parachutes, invariably leading to the development of dedicated troop parachutes, different transport aircraft models, jump procedures, drop altitudes, jumping weapons and equipment and safety procedures. Little effort was made to develop tactical concepts. Once it was decided to field larger units, officer and NCO cadres were first trained and then recruits accepted. Part of the cadre manned the new units and others operated the new parachute school.

Most countries first fielded one or two units based on conventional light infantry battalions. They continued developing jump procedures and multiple aircraft mass jumps, tested the dropping of heavier arms and equipment, and began to look at simple tactical aspects such as DZ assembly and conducting raids. Demolitions and sabotage training was common. As they struggled to acquire more transports, some higher commanders began to see the possibilities, and larger units were raised.

Depending on the country, airborne units could be army or air force, or in Germany's case, both. Some airborne army units were initially under air force control. The US Marines and Japanese Navy established their own parachute units. There was nearly always some dispute over who should control them: air forces argued that they were dependent on air for delivery, resupply and fire support, and armies argued that they needed to be trained infantrymen, that aircraft were merely a means of delivery, and that their ground operations were in support of advancing ground forces.

These early units were light and compact; only limited manpower resources were allotted, because of the expansion of pre-war armies, transport limitations, and in order to ease assembly and control on the ground. Supporting crew-served weapons were minimal and service support almost non-existent, so these specialized units relied greatly on outside support. It was also envisioned that during an operation the entire unit would deploy; there was then no concept of a rear base or support echelon that would link up later and reinforce the unit's capabilities.

The airborne regiment or brigade

When regiments were organized – at least initially – they had only two battalions. Even companies might have only two platoons, and platoons only two squads/sections rather than the normal three subunits. It was desirable to limit the size of squads/sections so that each would fit into a single transport or glider. Subunits were later expanded as more manpower and airlift resources became available and transport capacities increased. The traditional three subunits at any given level was preferred because of tactical flexibility, the need for a reserve subunit ('two up, one back'), and the need for commonality of tactics with the conventional infantry in which officers and NCOs were trained. Most countries eventually adopted organizations with three subunits. The US was one of the last to accept this: parachute rifle companies had only two platoons until late 1944, and glider infantry regiments had only two battalions until mid-1944.

The US considered calling multi-battalion groupings either 'regiments' or 'groups'; the former term was selected rather than the more nebulous 'group', as it was the traditional infantry tactical unit, and for every three battalions raised it almost guaranteed that a regimental headquarters would be activated. The Germans also termed multi-battalion units regiments, while the British used brigades, their traditional grouping for infantry battalions.[2]

Early units might possess minimal organic signal, engineer and light crew-served weapons subunits. The first non-infantry support units formed were engineers (sappers), with a mainly demolition mission. Small signal and heavy weapons units were also raised, including light artillery (Lt Arty), mortar (Mtr), anti-tank (AT) and anti-aircraft (AA).

The airborne division

Higher commands were reluctant to organize airborne formations larger than regiments, even when it was recognized that higher command and control headquarters were necessary for training, planning, staging, supporting and sustaining operations. The US at first suggested that parachute and glider regiments could be formed into temporary task forces tailored for specific missions, but such ad hoc formations were ineffectual and failed to provide operational continuity.

The first airborne divisions were reluctantly raised, usually with only minimal combat support and service assets; what support units were provided could, in theory, be augmented by additional conventional units. These early divisions were small, frequently only half to two-thirds the strength of an infantry division. The mix of parachute and glider units varied. The Germans, who formed the first airborne division in 1938, employed divisions of three parachute regiments, which could land by glider if necessary. The British established their first division at the end of 1941, with one air-landing and two parachute brigades. The US organized its first two divisions in early 1942, each with one parachute and two glider regiments. In any of these divisions the mix of regiments/brigades could be changed or additional units attached.

The battalion was the most important tactical echelon at this time. A comparison of the different countries' 1940/41 parachute battalions shows similarities and differences, including wide differences in troop strength:

British **Parachute Battalion, 1940** (530 all ranks)
- Battalion HQ
- HQ Company:
  - Company HQ
  - Mortar Platoon (4x 3in mortar)
  - Signals Platoon
  - Administrative Platoon
  - Intelligence Section
- Rifle Company (x3):
  - Company HQ
  - Rifle Platoon (x3) (each 3x light machine-gun, 1x 2in mortar)

German **Parachute Infantry Battalion, 1940** (705)
- Battalion HQ
- Signal Troop
- Rifle Company (x3):
  - Company Troop (HQ)
  - Rifle Platoon (x3) (each 3x light machine-gun)
  - Mortar Troop (5cm)
- Machine Gun Company:
  - Company Troop (HQ)
  - Machine Gun Platoon (x2) (each 3x heavy machine-gun)
  - Mortar Platoon (6x 8cm)

US Army **Parachute Infantry Battalion, 1941** (518)
- Battalion HQ and HQ Company:
  - Company HQ Platoon
  - Communications Platoon
  - Supply Platoon
  - Medical Detachment
- Rifle Company (x3):
  - Company HQ
  - Rifle Platoon (x2) (each 2x light machine-gun, 1x 60mm mortar)

US Marine **Parachute Battalion, 1941** (620)
- HQ Company:
  - Company HQ
  - Battalion HQ
  - Demolition Platoon
- Rifle Company (x3):
  - Company HQ
  - Rifle Platoon (x3) (each 3x light machine-gun, 1x 60mm mortar)

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[2] *In British and Commonwealth armies, 'regiments' in non-infantry arms are battalion-sized units. Infantry 'regiments' provide traditional designations but have no tactical role; any number of tactical battalions are numbered as part of the traditional regiment, but are tactically grouped into numbered brigades.*

Glider units were organized along the lines of conventional infantry units, but with strength reduced, lighter weapons provided, and subunits sized to accommodate glider capacity. The US glider regiment had only two battalions of three companies each, and companies had only two rifle platoons. British air-landing battalions were more robust, having four rifle companies with four rifle platoons each.

DELIVERY TO THE BATTLEFIELD

Transport aircraft served the airborne troops in a number of distinct roles: dropping paratroopers, supplies and equipment; towing gliders; and air-landing troops and cargo.

Transport aircraft

Little development of troop transport aircraft had been undertaken prior to World War II. Only the US, with its long internal distances, had looked deeply into the question. What few transports were available originated from three sources: the conversion of existing bombers, the modification of what was originally a bomber design into a dedicated transport, and the adaptation of commercial airliners. Those based on bombers typically lacked adequate troop accommodation and appropriate exit doors; they could not accommodate bulk cargo, nor had sufficiently large doors to allow it to be loaded. The small doors also prevented large cargo loads from being dropped by parachute, unless, for example, a crew-served weapon could be broken down into smaller packages. Adapted airliners could carry troops, but they too usually had only small doors, thus hampering paratrooper exit and the loading/dropping of cargo. Intended for civilian service on improved runways, they often lacked robustness.

The number of transports necessary to deliver an airborne force was considerable. The British required 12 old Whitley bombers, and the Germans 13 Junkers Ju 52 transports, to

The Junkers Ju 52/3m trimotor – commonly known as Tante Ju ('Aunt Judy'), Alte eisener Tante ('Old Iron Aunt'), or Judula – was the primary German jump aircraft, glider tug and airlift transport; it could carry 12–13 jumpers or 17 troops. Dating from 1930 as an airliner, it was modified for the then-secret Luftwaffe in 1934 as a bomber. It was upgraded in 1935 with more powerful engines and a strengthened undercarriage, and served as Germany's all-purpose military transport throughout the war. Transport units were designated 'Bomber Groups on Special Employment' – KGrzbV – until gathered in five Transport Geschwader in May 1943. (Private collection)

The American C-47 Skytrain (aka 'Gooney Bird'), a modification of the pre-war Douglas DC-3 airliner, was the workhorse of the World War II Allied air transport effort, and made an enormous world-wide contribution to eventual victory. It served the airborne forces as a paratroop and supply drop aircraft and glider tug, and air-landed troops, equipment and supplies. It could carry 28 troops or 19–25 jumpers.

drop one company. The US Marines required six transport squadrons each with 12 R4D (C-47) transports to drop a parachute battalion. A US parachute company needed nine or ten C-47 transports, but when rifle platoons received a third squad in 1944 this increased to 13. (The British also used the C-47 as soon as enough were available, naming it the Dakota.)

Bombers were employed by many countries to partly alleviate transport shortages. While seldom effective for troop dropping unless modified, they were used to drop cargo bundles from bomb bays or under-wing racks, and as glider tugs; some were also used to air-land troops. They had the advantage of longer range than some transports. Most armament and gunners were removed when they were employed as troop carriers.

Troop transport units had to be specially trained to conduct parachute-dropping and glider-towing missions; it was soon found that air forces could not task just any transport unit with this mission without substantial instruction and rehearsal.

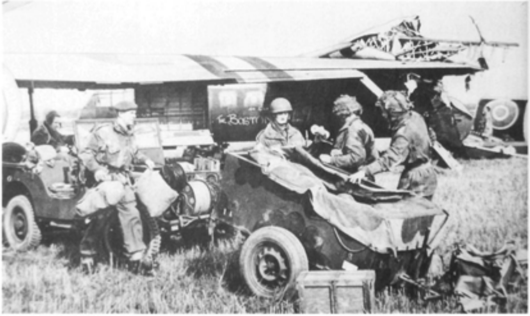
Gliders

Sport and training gliders were small, sleek, and constructed of light, fragile materials; they carried only one or two persons, and were not expected to endure rough treatment. Troop/cargo gliders, on the other hand, had to carry at least a squad of combat-loaded infantrymen or heavy weapons with their ammunition, or even a light vehicle and cargo, plus one or two crewmen. They had to be lightly constructed so as to allow the maximum passenger/cargo capacity, but robust enough to carry the heavy loads and survive a landing on less than ideal LZs, whose rough ground might be obstructed by trees, hedges and even man-made obstacles. They needed to be constructed cheaply, because they were unlikely to survive an operational flight in recoverable condition. They also competed for production line space and materials with higher priority combat aircraft and the very transports necessary to tow gliders. Their need to be light, cheap, robust, survivable and capable of carrying heavy loads presented a difficult design challenge. Most troop/cargo gliders were constructed of wood framing or aluminium tubing, plywood sheet and fabric, using ingenious design features to provide the necessary strength. They were generally boxy designs or long cylindrical tubes with wide, thick wings, and weighed from 3 to 8 tons.

Gliders under tow gave a rough ride owing to turbulence, and had to ride high or low – above or below the tug's slipstream. Sometimes intercom communications linked the glider pilot to the tug, but often instructions and release had to be communicated by arm, flag or light signals. The tow line could be released by either the tug or the glider. The tug aircraft determined the release location, but it was still up to glider pilots to find the LZ and to choose a precise landing point on an LZ rapidly becoming filled with gliders.

Besides delivering assault troops, gliders were employed to land heavy weapons, light vehicles, ammunition, rations, water and medical supplies. Tests were conducted dropping paratroopers from gliders followed by more jumping from the towing transport, in order to partly make up for scarce transports; while successful, this was never undertaken operationally. Also, to save on tugs, two and even three gliders were sometimes towed in tandem by a single transport or bomber. This reduced the range of the tug, however, and was not without danger of mid-air collisions. In most cases gliders were not used as much as originally anticipated. Adequate numbers were often unavailable in the right place at the right time, and it was no simple matter to ferry gliders to the operational area for use. The available gliders were also sometimes found to be damaged from hard training use.

The typical troop/cargo glider carried a single squad, 8–14 men, though in some instances double that number. Efforts were made to develop larger cargo gliders to deliver artillery, vehicles and other heavy equipment, even light tanks. While some were employed, they were difficult to fly and dangerous to land on rough LZs. Some extremely



The British Airspeed Horsa glider was designed so that the rear fuselage and tail section could be removed behind the wings for loading and unloading large cargoes. Even when gliders were damaged on landing, equipment could still be salvaged from them. This Horsa, photographed near Arnhem in September 1944, has the tail assembly removed to drive off a jeep and trailer; troops and cargo off-loaded through the drop side door aft of the cockpit (seen here above the jeep windscreen). A Horsa could alternatively carry 25 passengers or an AT gun.

heavy gliders were developed, requiring two and even three tug aircraft, but this was inviting disaster: multiple aircraft are extremely difficult to fly when closely tethered.

The Germans and Japanese employed glider units with their own pilots, which would be attached to special transport units for towing. The US augmented transport units with gliders, and their pilots became part of the unit. The British attached glider pilot units to the airborne divisions, and they operated with the transport units detailed for towing; once on the ground British glider pilots formed an infantry unit to aid in airhead defence. The Americans never did develop a good plan for what to do with their glider pilots once on the ground, other than evacuate them as soon as possible.

There were seemingly never enough transports and gliders to support airborne operations. Even the major, long-planned operations experienced shortfalls. Production lines simply could not keep pace with demand, especially since the need for transports was much higher than anticipated – as were losses. Combat aircraft and even trainers had priority over the production of transports and gliders. To make matters worse, during a given operation some transports would suffer mechanical failures or accidents, or were downed by enemy fire, thus reducing those available to deliver follow-on waves of jumpers, resupply drops, and air-landing reinforcements and heavy equipment. Indeed, it was not uncommon for insufficient transports to be available to deliver a first-wave force of the desired size, and the same aircraft had to make a quick turnaround, refuelling and loading the second lift while the initial assault force fought to retain its shaky hold.

Telephone and power lines and poles are more of a hazard to paratroopers than trees. However, these appear to be cargo parachutes – note the different colours – caught up during the US 17th Airborne Division's Rhine jump in March 1945.

Parachutes

Early parachute units at first used standard aircrew emergency parachutes of the back- or seat-pack types. These were activated by the jumper pulling a ripcord while in free fall, which required additional training, a higher jump altitude, and a high degree of jumper stability – difficult to achieve with a heavy burden of combat equipment.

All countries developed purpose-made troop parachutes. These typically consisted of a back-mounted main parachute and usually a chest-mounted reserve (smaller in diameter than the main), the latter activated by ripcord. The main canopy was activated by a static line: i.e., it was attached to a web strap or rope approximately 15ft (4.6m) long, the other end being clipped to a steel cable running the length of the troop compartment. As the jumper exited the door the static line pulled the canopy out of the backpack, and after it inflated a light connecting cord snapped, separating the static line from the canopy – a sequence of events requiring only seconds.

Germany, Italy and Britain did not use reserve packs, and troops of other armies sometimes made combat jumps without reserves. Owing to the low jump altitudes, in the event of a main pack malfunction there was no time to deploy a slower-opening reserve before hitting the ground, and it was not worth encumbering jumpers already burdened with equipment. A troop parachute harness also had attachment rings for equipment, and sometimes a quick-release means of shedding the harness.

Parachute canopies were typically 22–28ft (6.7–8.5m) in diameter and made of silk. Though bulky, silk was an excellent material for the purpose, but its supply was cut off to most countries by the Pacific War. Rayon was used instead, and late in the war the US began using nylon, which proved better than silk. Canopies were generally white, but it was soon realized that conspicuous white canopies left on the ground and hung in trees attracted enemy fighters and even gave an indication of the size of the airborne force. Jumpers did not always have time to collect parachutes and haul them off the DZ with all their other equipment. White main canopies remained in use for training parachutes (the British also used yellow) and for reserves. The Germans used four-colour camouflage, the British a dark green and black camouflage, the US solid olive drab or three-colour camouflage – though white canopies were still used.

Cargo parachutes of various sizes were provided to drop weapons and cargo containers, activated by a static line. Cargo parachutes were cheaply constructed since they were generally used only once. Most countries provided cargo parachutes in a variety of colours allowing the load to be identified as e.g. weapons, ammunition, signal gear, rations, water or medical supplies.

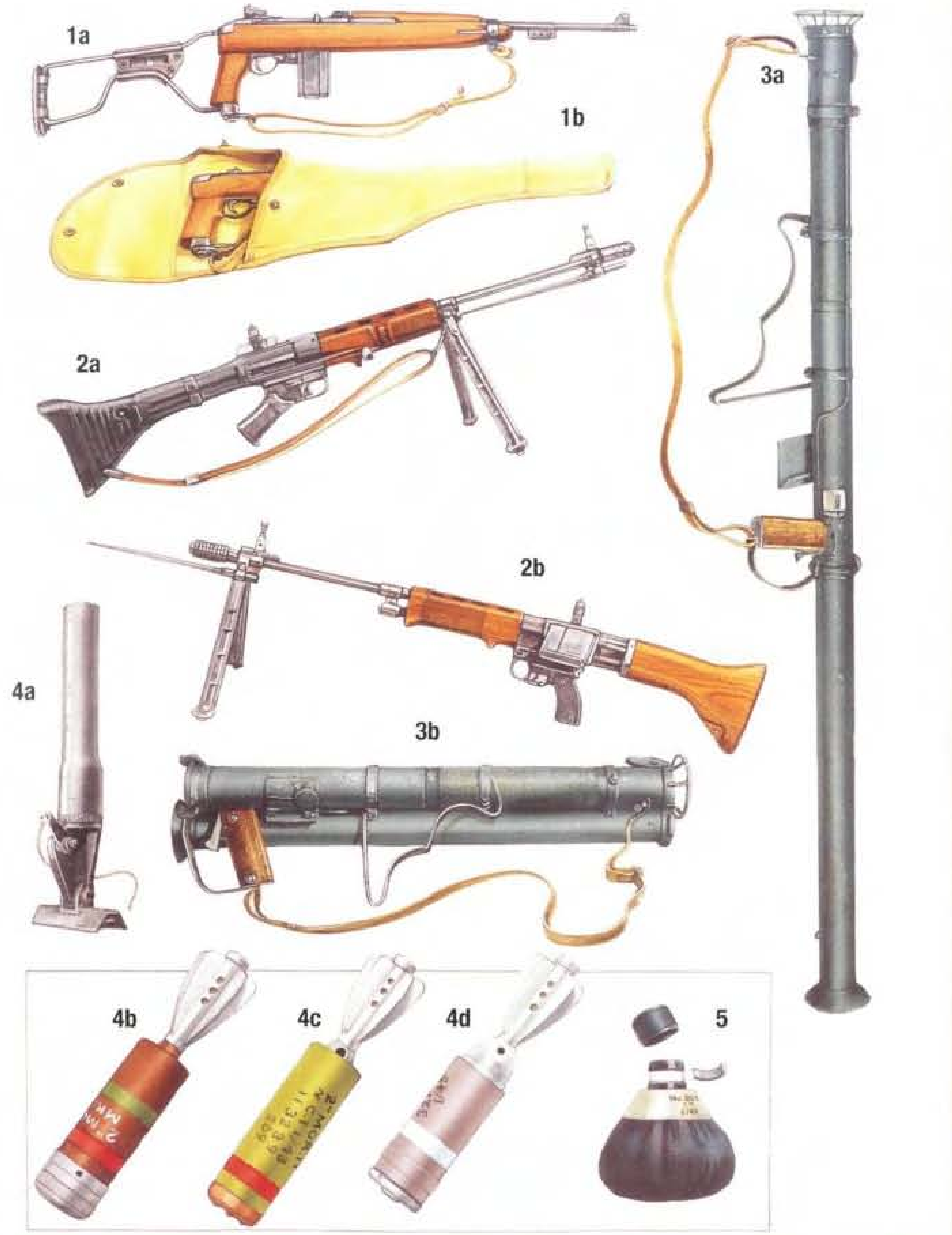
Weapons and equipment

The weapons and unit equipment used by airborne forces obviously had to be light, compact, but rugged, and there were other considerations. The maximum use of standard gear was preferable, or at least only simple modifications made to adapt for use by airborne forces.

Small arms and crew-served weapons

Airborne forces were comparatively small, and it was not cost- or resource-effective to develop overly specialized weapons for them unless absolutely necessary. Existing

SPECIALIZED AIRBORNE WEAPONS



The folding-stock .30cal M1A1 carbine (**1a**) saw limited use, but many units received the conventional M1 with fixed wooden stock. A canvas holster (**1b**) was produced for carrying the M1A1 on the jump. One rare example of a weapon developed specifically for paratroops was the German 7.92mm FG42 (**2a**). It was later modified with a wooden butt and pistol grip and the bipod moved to the muzzle (**2b**). At the request of the Airborne Command the M9 and M9A1 (**3a**) were developed. These were capable of being broken down into two 31in (79cm) sections (**3b**) to be carried by a paratrooper in a special bag. The British 2in infantry platoon mortar was 27in (69cm) long; a special airborne 2in mortar Mk VIII (**4a**) was issued, cut down to 19 inches (48cm). Like the basic models, this fired $9^{1}/_{2}$in-long (24cm) HE (**4b**) and smoke (**4c**), and 9in parachute flare (**4d**) rounds. While not produced specifically for paratroopers, the British No 82 'Gammon grenade' (**5**) was so widely used by British and American airborne troops that it is popularly associated with them. (Peter Dennis © Osprey Publishing Ltd)

conventional weapons were used whenever possible, to reduce the burden on the supply system, make training easier, keep production lines open for standard rather than specialized weapons, and eliminate the need for additional repair parts. If more compact weapons were necessary then conventional weapons might be modified, e.g. with folding stocks, rather than developing new weapons. With regard to crew-served weapons, older, and therefore lighter, though less capable models were sometimes substituted for current standard models. In other instances currently available weapons already built for specialized purposes were used, such as mountain guns or pack artillery, as well as infantry guns.[3] Such weapons were already designed to be lighter, more compact, and capable of being broken down into smaller components for man- or animal-packing.

Initially it was felt that rifles and other individual weapons were too bulky to attach to paratroopers when jumping. They posed a safety hazard, as the weapon might become entangled in the deploying parachute, or injure the jumper as he carried out the hard, rolling landing imposed by parachutes of that period. Individual weapons would be dropped in separate containers along with ammunition and supplies; for this reason early paratroopers often jumped armed only with a pistol and a few hand grenades. Sub-machine-guns were already more compact, though often heavier than rifles, and folding-stock types such as the German MP38/40 series could be carried on the jump. Some had detachable stocks, such as the British Sten, allowing them to be partly disassembled for the jump. The US M1 rifle could easily be broken down into two components and jumped in a padded container. The standard bolt-action rifles used by most countries could not so easily be broken down, having one-piece stocks almost as long as the assembled weapons; nonetheless, rifles were sometimes jumped in combat, with varying degrees of success. Disassembled weapons were usually secured to the torso above the reserve, which provided more protection to the jumper and weapon. It was found to be ill-advised to secure the weapon under the parachute harness, as the opening shock jammed it into the jumper's chest.

The US fielded a metal folding stock for the M1 carbine. These were about the only such individual weapons fielded for paratroopers, other than sub-machine-guns. Others simply used standard rifles, and developed jump containers that were fastened to the jumper's side and dropped on a short lowering line once the parachute opened, to protect the jumper from injury by the weapon when landing. The containers were usually padded to protect both the jumper and weapon.

Machine-guns and automatic rifles were a different matter. They might be capable of being broken down but were heavy and bulky, and had to be dropped in separate containers, along with mortars. Machine-guns with detachable quick-change barrels such as the British Bren and German MG34 could be jumped in compact containers, and the Japanese developed a take-down version of their standard Type 99 light machine-gun.

Anti-tank (AT) weapons were a major problem. Early in the war most countries used an AT rifle; these were heavy, unwieldy, unable to be broken down, and unsuited for jumping even in drop containers. American bazookas were bulky, but light enough to be jumped, albeit with difficulty until a take-down version was developed.

Because airborne units, especially paratroopers, were so lightly armed (and in part as a legacy of the original concept of their employment as commandos), they were allocated a high proportion of sub-machine-guns and light machine-guns. This was particularly helpful, since they were often forced to fight in small, scattered groups. They were also amply provided with hand and rifle grenades and demolition charges. Anti-tank grenades and mines were widely issued in an effort to make up for the dearth of AT weapons, but were poor substitutes. A knife or bayonet was essential. Paratroopers were habitually trained to use all weapons assigned to their unit, as well as enemy types.

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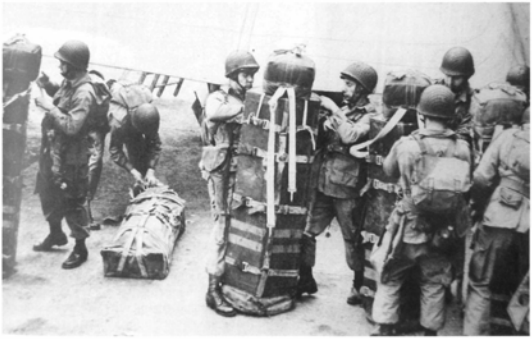
[3] *Infantry guns were light, compact, simplified artillery pieces operated by infantrymen rather than artillerymen, and organic to infantry units in some armies.*

Support weapons

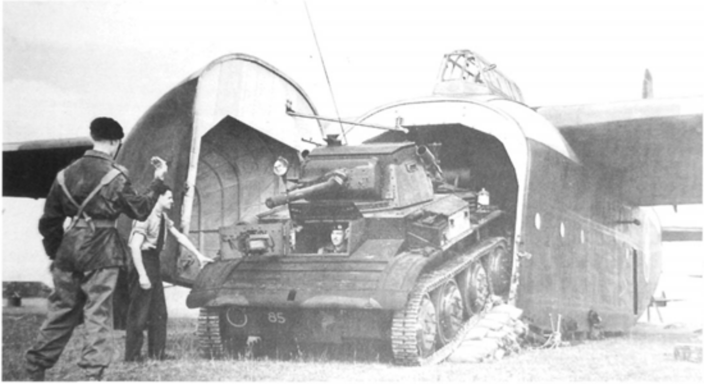
In theory, heavier weapons such as AT guns, light artillery and recoilless guns could be dropped by parachute. This required considerable aircraft space, and the weapons had to be broken down into numerous components – transport aircraft with tailgate doors were not yet available. The several components of a disassembled crew-served weapon were dropped in special containers or bundles. Ammunition and gun equipment had to be dropped as well, which resulted in a considerable number of containers to locate, move and assemble on the DZ – always assuming that all components could be found and were undamaged. Usually only a small number of such crew-served weapons were dropped, if any, the bulk being flown in by glider or transport.

The limited availability of artillery and heavy mortars not only restricted the amount of fire support for ground assaults, but limited defensive fires and counter-battery/counter-mortar capabilities. The US and British used the 75mm pack howitzer, compact and easily broken down into seven components. The Germans used mountain and infantry guns, both compact weapons. The Germans also made limited use of recoilless guns, which they called 'light guns'. Small (50/60mm) and medium (81/82mm) mortars were also widely used by airborne troops, since they too could be broken down into compact loads for dropping and man-packing.

The air-dropped equipment containers were usually slung on under-wing shackles or dropped from bombers' bays. While they might also be pushed out the door with the jumpers following, this resulted in more dispersion. It was more efficient to drop the containers from external racks at the same time as the troops jumped, despite the danger of jumpers and equipment colliding. Containers were usually constructed of combinations of aluminium, plywood, wicker and padded canvas. They might be externally coloured or coded to identify their contents – camouflaging colours hampered recovery. The contents had to be padded, and a padded or collapsing shock-absorbing cushion was provided on the



US parachute artillerymen prepare 75mm pack howitzer component containers before attaching them to under-wing shackles. Usually the containers would be dropped first and the paratroopers would follow, the theory being that they could observe where the containers landed. These are, of course, larger than the typical supply drop containers.



A British Tetrarch light tank of 6th Airborne Division's armoured reconnaissance regiment is unloaded from a Hamilcar glider. Tailored especially for the Tetrarch, this was the largest glider built by the Allies, with a wingspan of 150ft (46m), an unloaded weight of 16 tons, and a payload of 7.8 tons GB (8.75 tons US): a light tank, or two Bren carriers, or a 25pdr gun-howitzer. The British employed some of these 2pdr-gun tanks in Normandy, and those that survived the perilous landings near Ranville provided some support until replaced by sea-landed 75mm Cromwell medium tanks. The dangers of flying and landing such heavy and skittish loads by glider were considerable, and their combat capability was really too limited to be worth the effort.

bottom end of containers. Besides the size and weight limitations imposed by shackles and parachute capabilities, it was preferable for a container to be carriable on the ground by two men, certainly no more than four, to ease recovery. Some were fitted with small detachable wheels to allow them to be pulled off the DZ, but even moderate vegetation and rough ground made this impractical. In addition to door bundles, jumpers themselves were sometimes fitted with drop containers for crew-served weapons or supplies. The heavily loaded jumper would be the first man in the door, since it was extremely difficult to move rapidly in a bouncing, crowded aircraft; he would 'fall' out rather than jump, and release the container on a lowering line once his canopy deployed.

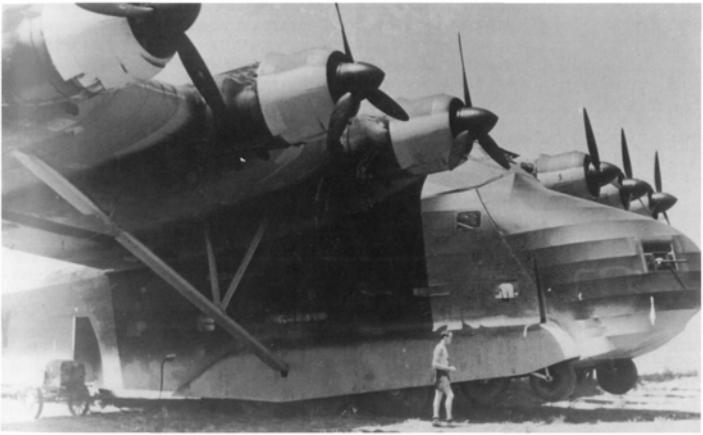
Anti-aircraft weapons were especially important, as deployed airborne troops were vulnerable to air attack. Such weapons are heavy, bulky and require a great deal of ammunition. This limited them to small-calibre automatic cannons and heavy machine-guns on AA mounts, delivered by gliders or transports. Efforts were made to make the AA weapons capable of anti-tank use as well, though their small calibre was a limitation in this role. The US divisional 'anti-aircraft battalion' in fact had two AA batteries with .50cal M2 machine-guns (and later, 40mm cannon); and two AT batteries, with the 57mm M1 AT gun. (The US 57mm was a licensed copy of the British 6pdr AT gun; it was found that slight differences in design allowed the British version to fit into gliders better, and the British guns were issued to US airborne divisions.)

Some efforts were made to develop air-delivered light armoured vehicles, since it was felt that even a small number of light tanks might give air-delivered units more of an edge defensively and offensively. No efforts were made to airdrop tanks; most countries designed these tankettes to be delivered by heavy gliders or transports. (The British studied an auto-gyro tank, and the Soviets a tank fitted with glider wings.) The reality was that such lightly armoured and armed tankettes employed in small numbers were of little value, and hardly worth the developmental and heavy airlift resources they demanded, since they were extremely vulnerable to enemy tanks and AT weapons. In the very few instances where glider-delivered tanks were employed, their contribution was short-lived. On the evening of D-Day, 6 June 1944, the British 6th Airborne Division in Normandy received eight Tetrarch Mk VII light tanks of the divisional reconnaissance regiment, delivered by Hamilcar heavy gliders. Some use was also made of light armoured cars and tracked carriers by airborne forces.

In all categories of weapons available to airborne troops, limited numbers and light weight were a given, and this posed a problem when it was necessary for airborne forces to fight as conventional infantry. In such cases it was necessary to attach additional combat support units such as AT, AA and armour. The 82nd Airborne Division in Normandy deployed with 75mm pack howitzers, but once the sea-delivered echelon arrived these were replaced with 105mm howitzers. As time went on many airborne forces were provided with heavier and more abundant weapons, in recognition that in all probability they would remain on the ground to fight conventionally.

Equipment

In the realm of unit equipment airborne forces were provided with even more specialized matériel than with weapons.



In May 1941 the Luftwaffe received the huge Me 321 Gigant glider, first conceived for the planned invasion of Britain. With a payload of 22 tons, it could carry 120 fully equipped troops (up to 200, in emergency evacuations) or an 8.8cm gun; but it was not available for the Crete operation that month. In November 1942 this six-engine powered version, the Me 323D Gigant, came into service with I/KGzbV 323 as a strategic transport, capable of lifting about 15 tons. The Me 323E of 1944 could lift nearly 30 tons; but although it was used on the Mediterranean and Russian fronts throughout the war, it was never deployed as a dedicated asset for airborne forces. (Private collection)

Communications was an especially important area. Period radios were heavy, bulky, temperamental, fragile and often short-ranged. Long-range radios capable of Morse code transmissions were even heavier; they needed heavy batteries (for which replacements had to be carried) or power generators and erection of long wire antennae, and they could not be operated on the move – in other words, exactly the opposite characteristics to what was needed. Efforts to develop suitable radios did not bear fruit until late in the war, and most airborne forces had few. Intra-unit radio communication was also essential for command and control, as elements were so widely scattered that good communications were necessary to coordinate their assembly. Field telephones were of little use until the unit assembled and established defensive positions. An especially important need for radios existed in air-to-ground communications, to request and coordinate close air support and resupply/reinforcement drops.

Marker panel codes to mark the airborne force's locations and convey simple messages were of limited use in fast-moving situations, at night, or poor weather conditions (rain, fog, mist, snow or dust). Some forces devised a means of using parachute canopies as signal panels, and national flags or colour-coded panels were used to mark unit positions to prevent their being attacked by friendly aircraft. Signal flares and coloured smoke were widely used, but had their own limitations in communicating information. Various types of signal lamps were used to transmit rudimentary information or Morse code; even carrier pigeons were tried. The limited and unreliable communications available often meant that higher headquarters were largely in the dark as to the situation on the ground, be it success, failure or need for resupply. It was not uncommon for liaison/spotter aircraft to fly into airheads, landing on a crude airstrip or clearing and flying messages back to headquarters.

Various means were used by early-arriving pathfinders to mark DZs, or by the first waves to mark DZ/LZs for subsequent lifts: special radio beacons, code-flashing signal lamps, coloured flares and smoke signals, fire pots, and coloured marker panels arranged in predetermined shapes or letters to identify specific DZ/LZs. Even buildings might be set alight to mark DZ/LZs, or bombers might drop incendiary bombs at predetermined points as guide markers. Signals were also arranged to warn off aircraft, cancel lifts, or direct them to alternate DZ/LZs.

Another major weakness of airborne forces was mobility. While their air-deliverable capability gave them an unprecedentedly rapid strategic reach, once on the ground they were reduced to foot infantry. While popularly viewed as 'light, swift and deadly', the reality was that individual paratroopers often jumped in more heavily burdened than their conventional counterparts. Conventional infantry were supported by a logistical tail from nearby supply points and had some degree of tactical transport. Paratroopers had to carry everything they needed, at least for the first few days: ammunition, including a share of the large amounts needed for crew-served weapons, mines, demolitions, rations, medical supplies, water, radio batteries, and every other necessity. Part of the training of a paratrooper was to teach him to commandeer anything of use.

As with artillery, even light trucks could not be dropped, being delivered by gliders or transports, and even then nothing much bigger than a jeep could be flown in. The few vehicles available were essential for towing artillery and AT guns along with ammunition; often they might have to shuttle several weapons in turn, as there were not enough for one to be dedicated to each piece. This greatly limited the ability to displace weapons forward during the advance, or to reposition them quickly to where they were needed. This was a severe liability with AT weapons, which had to be positioned rapidly to meet the threat and displaced to alternate firing positions in order to survive. To make matters worse, only the heaviest cargo gliders could carry both a gun and its prime mover, most only accommodating a single heavy weapon or a vehicle. A small number of vehicles might be used to carry long-range and air-to-ground radios for the command group.

Captured military and commandeered civilian vehicles and even horses and wagons were valuable assets, and their acquisition was considered in planning, although it could never be expected that sufficient numbers would fall into the hands of paratroopers. Motorcycles, motor-scooters and bicycles were occasionally dropped or glider-landed; some were made collapsible to pack into equipment containers. These had some utility for messengers and scouts, but did not improve overall mobility. Collapsible push-carts were also tried, but, like wheeled drop containers, they were of limited effectiveness.

Engineer equipment was another deficiency experienced by airborne forces. Airborne engineers had limited capabilities for breeching obstacles, supporting assaults or any type of construction. A key role would be repairing captured airfields, but they had little powered equipment to accomplish this, even if a suitable airstrip existed to allow landing them. Light bulldozers and some power tools could be delivered by airlift, but heavier equipment such as graders, rollers, dump trucks, power shovels, etc. had to arrive overland.

Later doctrine

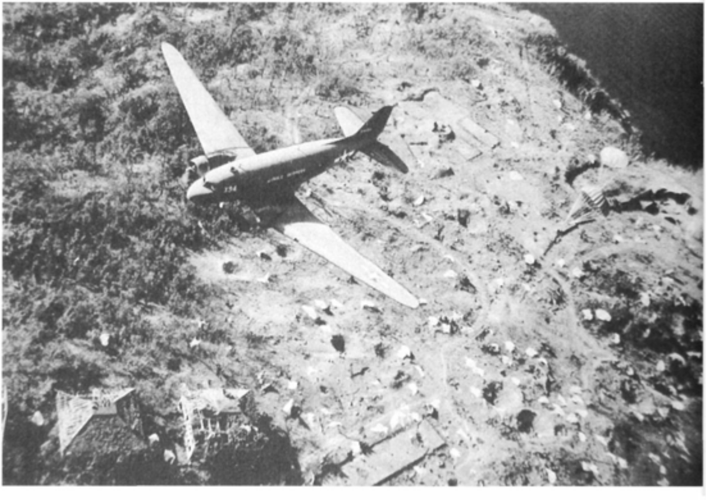
The Germans showed the way to more ambitious airborne operations with the 1941 invasion of Crete (see pp. 76–127), which involved – effectively – a division of four regiments. However, the Germans used the 'ink spot' concept of dropping numerous small units – battalions, companies and even platoons – over a large area to seize several objectives. In contrast to normal German military doctrine, which emphasized the concentration of forces for the main effort (*Schwerpunkt*), this idea was more akin to Napoleon's 'engage the enemy everywhere and then decide what to do'. In Holland and Belgium this had been successful, since resistance was light and disorganized. It was another matter on Crete, where it cost the Fallschirmjäger dearly. Although the British Commonwealth defences were neither strong nor well organized, the Germans lost some 6,000 men, including aircrews and the attempted seaborne phase intercepted by the Royal Navy. One out of five of the Fallschirmtruppen committed were killed and some 350 aircraft were lost, including 152 valuable transports.

The envisaged airborne assault on Malta was cancelled because of fears of a repeat (a decision which had dire consequences for Axis logistics in North Africa, ravaged by British submarines and aircraft from that island). After Crete the Germans executed six parachute operations, but only one in more than battalion strength. The exception was on Sicily in July 1943, when the 3rd and 4th Fallschirmjäger Regiments, a machine-gun battalion and a pioneer battalion were dropped in over four days as reinforcements. The other drops were essentially special operations: an attack on a now opposing Italian headquarters, seizures of two small islands, a raid on a Yugoslavian partisan headquarters, and a diversionary operation during the Ardennes offensive – of which the last two failed.

The Western Allies

It was now recognized that commando-type units were more effective for conducting the rare small-scale raids, and that parachute and glider troops were best committed in significant, concentrated numbers for larger-scale decisive operations. Allied operations thereafter were seldom smaller than regimental size and more frequently of divisional or even multi-divisional size. Such forces were better suited for seizing key objectives in the enemy's rear and holding them until relieved by ground forces; small units could not accomplish this – it was a mission demanding staying power.

US and British operations also had their initial problems. The smaller drops in North Africa met with mixed success. In July 1943 Operation *Husky* on Sicily involved two airborne divisions, US 82nd and British 1st, but led many to question the concept of airborne divisions attempting large-scale operations, citing parallels with Crete. The parachute troops were very widely scattered and few managed to reach their objective areas. Panicky Allied naval AA fire downed 40 per cent of one regiment's transports, and over half of the British air-landing brigade's gliders went down offshore. Casualties were high, and in most instances the amphibious landing forces did not receive the expected support of the airborne troops. A major problem was the poor training and coordination of airlift crews. The operation was not without its benefits, however, as the widely scattered



One of the most perilous jumps in World War II was the 503rd Parachute Infantry Regiment's assault on Corregidor in the Philippines on 16 February 1945. The DZ was extremely small, covered with trees and ruined buildings, and bordered on one side by 550ft (168m) cliffs dropping into Manila Bay – a particular hazard in the very high 25mph winds. Nevertheless, the operation was a successful example of a parachute unit seizing an island.

paratroopers created a great deal of confusion and damage in the German rear area. Many lessons were learned, but since no US gliders had been available for *Husky* no experience was gained in that area.

A major revelation of early operations was the importance of airlift transport squadrons being fully and specifically trained for airborne operations, working in very close cooperation with the troops. Such operations required a high degree of navigation skills and training in the identification of landmarks. The crews needed the discipline to maintain formation in poor visibility and when receiving AA fire, and the skill to maintain the necessary drop altitude and air speed. Glider tug crews needed additional skills in formation flying and determining release points.

Because airborne units were viewed as fast-moving, hard-hitting strike units with plentiful close-combat weapons, there was a mistaken impression that they would perform well in the conventional ground role. In fact they were too lightly armed, and too small to man the frontages of an infantry division; they lacked sufficient transport, and did not possess the necessary support units to sustain them. Most armies held to the concept that airborne units would be relieved within a matter of days after link-up with ground forces, and would return to their base for reconstitution and preparation for the next mission. More often than not, this did not in fact occur; when more troops than had been anticipated were found necessary to develop the offensive, airborne units were retained in the line to fight on in conventional ground operations (and some even conducted amphibious assaults). It also proved difficult to disengage a committed airborne division and move a relieving division forward on congested lines of communication.

Allied airborne operations in Italy were limited. British paras conducted an unopposed amphibious landing at Taranto and fought as infantry. Several US plans were made to parachute regiments behind beachheads, and one to seize airfields outside Rome; but the rugged terrain and air defences made the former plan unfeasible, and the latter was cancelled when the promised Italian support was judged shaky. Instead, two regiments were parachuted into the Salerno beachhead. A single battalion jumped near a mountain village 20 miles (32km) inland and was scattered over 100 square miles (260km²); it created a great deal of havoc with German reinforcements, and most of the paratroopers made it back to the beachhead weeks later. The 82nd continued to fight as infantry, and one regiment landed by sea at Anzio. The German 1st, 2nd and 4th Fallschirmjäger Divisions fought effectively in Italy, but here, as elsewhere, strictly as ground troops.

An important lesson was learned in Sicily and Italy: rather than teaching scattered paratroopers to attack any enemy they encountered, they were henceforth trained to avoid contact with large enemy elements and move toward their objectives where they would link up with comrades. Once their strength was gathered they could accomplish their primary mission, rather than be wasted away piecemeal while making nuisances of themselves. Nevertheless, individuals and small groups were still encouraged to attack equally small enemy elements to create confusion, cut telephone lines, and ambush couriers to disrupt enemy communications.

The June 1944 Normandy invasion (Operation *Overlord/Neptune*, see pp. 170–215) saw the US 82nd and 101st Airborne Divisions each go in with three parachute regiments and a glider regiment reinforced by a third battalion – 12 battalions each, rather than the standard eight. The British 6th Airborne Division employed an air-landing and two parachute brigades with a total of nine battalions. The three divisions' transports flew a roundabout route across the Channel, to the west of the Cotentin peninsula and then east 30 miles (48km) across the peninsula to drop 4–6 miles behind the landing beaches. The American divisions were tasked with securing the northern and southern inland flanks of the US landing beaches, and selected bridges and causeways leading inland from them. The British would secure the eastern flank of their beachhead, destroy an important coast defence battery, and secure or destroy certain river and canal bridges to allow the amphibious troops to move inland and to deny the bridges to German reinforcements. Landing five hours ahead of the amphibious assault, they effectively accomplished all these missions, though in many instances success was due to the initiative and aggression of troops whose operation plans had to be discarded from the moment they landed.

The US airborne had a rough time with heavy fog, some flak, and the loss of pathfinders; their transports became scattered and most units were badly dispersed, especially the 101st. A great deal of equipment was lost, and unit missions were only partly accomplished by the time of the amphibious landing, although all were eventually achieved. The widely scattered paratroopers and glider men created extensive confusion and harassed German units, hindering the attempted German reaction. The British division fared better with its more modest objectives, and most troops had the good fortune to land where they were meant to. The glider landing to seize bridges near Benouville reproduced – and by night – the success of the German 1940 Eben Emael operation; and the capture of the Merville battery was achieved although only some 25 per cent of the scattered 9th Parachute Battalion arrived in time for the attack.

Again, further training was proved necessary for airlift units, and more effective means were needed for marking DZ/LZs. Normandy would also be the final large-scale night drop: the risks of daylight operations were more acceptable, and daylight was necessary for the transports and gliders to locate their DZ/LZs. It would also reduce the number of glider crashes.

The August 1944 invasion of southern France (Operation *Dragoon/Anvil*) saw the formation of a provisional inter-Allied airborne division which included US and British units. In an early dawn drop 90 per cent of the paratroopers and glider men landed dead-on their planned zones; resistance was light, as were casualties. The operation had similar goals to that in Normandy, to secure inland objectives and block German reinforcements.

The September 1944 Netherlands operation (Operation *Market Garden*, see pp. 248–93) was a mixture of success and failure. The US 82nd and 101st Airborne Divisions were to secure a series of bridges leading into Holland to open a path for the British XXX Corps to slice through the country, flank the Westwall defences, and force an entry into Germany. All bridges were secured on D-Day except the northernmost, which required three more days. In the meantime the British 1st Airborne Division and the Polish Parachute Brigade dropped around Arnhem to secure the far end of the corridor. The distance between the target bridge over the Rhine and the DZ/LZs, chosen because of woodland and built-up areas, proved too great when the unexpected presence of Waffen-SS armoured units was revealed. By day the location of DZ/LZs was sucessful, and glider landing casualties were light; but there were many failures and mishaps both on the ground and in the air. A single battalion was cut off at the bridge, and the remainder of the division was left without many of its heavy weapons, vehicles or working radios. The airborne force was cut off, and eventually defeated after holding out for nine days.

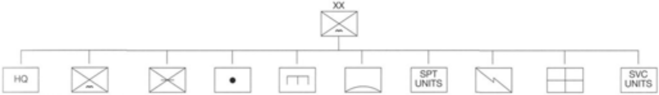
The final large-scale airborne operation was the March 1945 Rhine crossing (Operation *Varsity*). A new American airborne division, the 17th, accomplished the mission alongside the proven British 6th. Some 1,600 transports and over 1,300 gliders put 17,000 troops on the ground inside Germany in under three hours. The mission was to secure commanding terrain, road intersections and bridges beyond the river; the paratroopers also neutralized much of the German artillery.

On the other side of the world in the Pacific theatre more modest airborne operations were conducted, none being larger than regimental size, and no glider operations were accomplished. The distances involved, fast-changing situations, and difficulties in assembling sufficient airlift were obstacles. Typical airborne missions included raids, blocking enemy reinforcements or withdrawals, seizing small islands, and reinforcement of ground forces.

By the end of the war the US and Britain had developed a sound airborne doctrine. The US had specified the following missions for airborne units in Field Manual 31–30, *Tactics and Techniques of Air-Borne Troops*, in May 1942. Regardless of the many lessons learned and new developments in organization and tactics, it remained the main US doctrinal guide throughout the war:

Organization of the Airborne Division, 1944

Abbreviations: A/L = air-landing, Amb = ambulance, Bty = battery, Engr = engineer, Ind = independent, Mnt = maintenance, Mtr = mortar, Ord = ordnance, Prcht = parachute, Repl = replacement, Sig = signals, Sup = supply, Svc = service, Spt = support. *Note:* * = battalion-size



HQ						SPT UNITS			SVC UNITS
US Airborne Division (8,556 men)									
Divisional HQ	Prcht Inf Regt (x2): Bn (x3) Svc Co	Glider Inf Regt: Bn (x2) Svc Co	Abn Div Arty: Prcht Bn (x2) Glider Bn (x2)	Abn Engr Bn: Co (x3)	Abn AA Bn: Bty (x4)	MP Plat Recon Plat	Abn Sig Co	Abn Medic Co	Abn Ord Mnt Co Abn QM Spt Co Prcht Mnt Co
German Parachute Rifle Division (15,976 men)									
Divisional HQ	Prcht Rifle Regt (x3): Bn (x3) Mtr Co AT Co		Prcht Arty Regt: Bn (x3)	Prcht Engr Bn: Co (x4)	Prcht AA Bn: Hvy Bty (x4) Lt Bty	Prcht Mtr Bn: Co (x3) Repl Bn: Co (x5)	Prcht Sig Bn: Co (x2)	Prcht Medic Bn: Co (x2)	Prcht Sup troops Sup services Admin services
British Airborne Division (12,148 men)									
Divisional HQ	Prcht Bde (x2): Bn (x3) A/L Lt Arty Bty A/L AT Bty A/L Engr Sqn A/L Fld Amb	A/L Bde: Bn (x3) A/L Lt AA Bty A/L Fld Amb	A/L Lt Arty Regt:* Lt Arty Bty (x3)	Engr Fld Co Engr Park Co		Armd Recon Regt* Indep Prcht Co MP Co	Div Signals		Svc Co (x3) Workshops

Primary missions

1. Seize, hold, or otherwise exploit important tactical localities in conjunction with or pending the arrival of other forces.
2. Attack the enemy rear and assist a breakthrough or landing by the main force.
3. Block or delay enemy reserves by capturing and holding critical terrain features.
4. Delay a retreating enemy until the main forces can overtake and destroy him.

Secondary missions

1. Capture enemy airfields.
2. Create diversions.
3. Reinforce threatened or surrounded units.
4. Seize islands or areas not accessible to other ground forces.
5. Capture or destroy vital enemy installations, thereby disrupting his system of command, communications and supply.
6. Act as a constant threat by their mere presence in the theatre of operations, thereby *causing the enemy to disperse his forces over a wide area to protect vital installations*

A division or even units within a division could be assigned any combination of the above missions. These basic mission concepts were generally adopted by other nations, whose limited airborne forces undertook various raids, diversions and reconnaissance missions. Even rescue missions were accomplished, along with counter-landings into enemy beachheads.

Evolving organization

The value of airborne units, demonstrated by German successes in the Low Countries and the (albeit costly) victory on Crete, led to an expansion of airborne forces. To Hitler, victory on Crete had been achieved at far too high a price, and he vowed never to use such a valuable asset again in a similar manner; but to the Allies it heralded another means of defeating Hitler. Larger airborne formations began to appear from 1942 – divisions, corps and even armies. There was also a trend to arm airborne units more heavily and to strengthen them to levels similar to conventional infantry units, to allow them to be employed in prolonged combat operations.

The creation of such large airborne formations was sometimes controversial. Some felt that too many resources were being committed, and others that airborne forces should be kept small and without permanent divisional or higher headquarters. In the long run it proved to be more effective to form permanent headquarters than ad hoc task forces, so as to supervise training and planning and to control operations, as well as to ensure continuity of effort and unit cohesion.

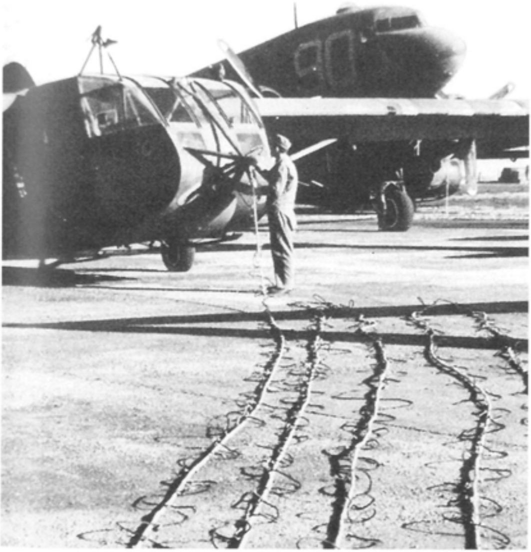
Germany

Although the first parachute division, 7th Flieger Division, was formed in July 1938, when first established it was hardly a tactical formation but rather a collection of experimental units and schools. It was not elevated to a tactical division until the eve of the war, and possessed only minimal support troops. In 1940, XI Fliegerkorps was formed to control the various parachute and air-landing units:

XI Flying Corps:

- Flying Leader XI (Corps HQ)
- Large Glider Command 1
- Airlanding Squadrons 1 and 2
- Bomber Group for Special Employment 9 (transports)
- Supplementary Groups 1 and 2
- Parachute Schools I–III
- 7th Flying Division
- 22nd (Airlanding) Infantry Division
- Airlanding Assault Regiment 1

Regardless of Hitler's dictate that the parachute troops would not again be employed in large scale airborne operations, 7th Flieger Division was converted into 1st Fallschirmjäger Division in May 1943, and 2nd Fallschirmjäger Division had been activated in February. In



Here a ground crewman double-checks the towrope release on a Waco CG-4A glider. The ropes are laid out in an 'S'- pattern to pay out smoothly as the tug takes off. The telephone intercom wire linking the pilots of the glider and its C-47 tug can be seen taped to the towrope in a manner that allowed for rope stretch.

October and November 1943 the 3rd and 4th Fallschirmjäger Divisions were raised, to be followed by the 5th, 6th and 7th in March, June and October 1944 respectively. The 7th Fallschirmjäger Division was formed from Fallschirmjäger Division Erdmann, an ad hoc formation of 'alarm' and training units. The original 2nd Fallschirmjäger Division was destroyed in France in September 1944, and a new 2nd Division was raised that December.

Also in 1944, the headquarters of a 1st Parachute Army (1st Fallschirm Armee) was organized, to control I and II Fallschirm Armeekorps. This 'parachute' army and its subordinate corps were by no means true parachute formations, and neither was the so-called Fallschirm Panzerkorps 'Hermann Göring'; none of these resoundingly titled formations had any parachute-trained units, and the 'Fallschirm' designation was given purely for morale purposes. By this time even the parachute divisions were seriously short of qualified parachutists: of the 160,000 troops assigned to 1st Fallschirm Armee, in two corps and six divisions, only 30,000 were parachutists. Newly raised divisions were normally assigned a regiment, or one or two veteran battalions, from an existing division plus some school and demonstration troops as a cadre; the rest were non-parachute-trained recruits. Only a percentage of the men in even the cadre units were themselves parachute-qualified, and these were scattered throughout the formation rather than retained as a cohesive unit. It was for this reason that a partly parachute-qualified ad hoc battlegroup had to be assembled from both 1st Fallschirmjäger Division and 6th Fallschirmjäger Regiment for the 1944 Ardennes jump.

The new Fallschirmjäger divisions were heavier, well supplied with support units, and better suited for the conventional ground combat to which they were committed. The 3rd and 5th–8th Fallschirmjäger Divisions fought on the Western Front, the 4th on the Southern, the 9th on the Eastern, the 1st on the Eastern and Southern, and the 2nd on all three fronts. From February 1942 to May 1943 Fallschirmjäger Brigade Ramcke, comprising battalions drawn from other formations, served in North Africa. As the war progressed the divisions were provided still heavier weapons, approaching those of an army infantry division. For example, the original Fallschirm Artillerie Regiment possessed only one light battalion, but in May 1944 another light and a medium battalion were added, along with a heavy mortar battalion – although many such regiments remained under strength in practice. Anti-tank weapons were also increased. The 1944 Fallschirmjäger Regiment establishment demonstrates the extent of this upgrading:

German Parachute Rifle Regiment, 1944 (3,206 all ranks)
Regimental Staff
Infantry Battalion (x3):
  Battalion Staff
  Rifle Company (x3) (each 9x light machine-gun, 3x 8cm mortar)
  Machine Gun Company (8x heavy machine-gun, 4x 8cm mortar, 2x 7.5cm gun[4])
Anti-Tank Company (3x 7.5cm anti-tank gun, 27x 8.8cm bazooka)[5]
Mortar Company (12x 12cm heavy mortar)[6]
Pioneer Company[7]

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[4] *Infantry guns passed down when regimental infantry gun company was replaced by mortar company.*

[5] *9x 3.7cm AT gun prior to 1944; 'bazooka'* = Panzerschreck.

[6] *Replaced infantry gun company (6x 7.5cm guns) in 1944.*

[7] *i.e. Assault Engineers; added in 1944 by consolidating battalion platoons.*

1st Luftlandesturm Regiment was absorbed into other units in 1943. Numbers of separate Fallschirmjäger regiments and battalions were raised, but they were eventually absorbed into new divisions. The 8th, 9th and 10th Fallschirmjäger Divisions were ordered formed in September 1944, but were cancelled during their organization and their personnel transferred to other divisions. The 11th, 20th and 21st Fallschirmjäger Divisions began to form in March and April 1945, but were very far from complete by the end of the war in May.

After being deployed in its air-landing role in the Netherlands in 1940, 22nd Infantry (Luftlande) Division was needed for the Crete invasion as a follow-on force for the Fallschirmjäger. However, the Germans made the mistake of previously committing it to ground combat elsewhere, and had to find a substitute. The mountain-trained 5th Gebirgsjäger Division, being lightly equipped, was committed to Crete by air and sea (resulting in its soldiers jokingly referring to themselves as the '5th Mountain/Airlanding/Naval Infantry Division'). The 22nd Luftlande Division reverted to a conventional infantry role. Regardless, in March 1944 the 91st Infantry (Luftlande) Division was re-organized in Normandy as a counter-invasion reaction force, and FJR 6 was attached as its third regiment. The division was never employed in this role, and was re-organized as 344th Infantry Division in November, with 6th Fallschirmjäger Regiment becoming an army-level asset.

Great Britain

The 1st Airborne Division, established in late 1941, was joined by the 6th in May 1943. The 1st had fought in Africa, Sicily and Italy, but the new division would not see combat until the Normandy jump. The 1st had to be rebuilt after infantry service in the Mediterranean, and then carried out the Arnhem assault. The 6th later took part in the Rhine crossing operation. On paper the divisions each possessed one air-landing and two parachute brigades, but in practice might have a third parachute brigade attached.

The British brigade organization was different from that in most armies. The division held only minimal support units plus battalion-size artillery, AT and reconnaissance regiments, and a single engineer company. However, each parachute brigade had assigned support units. The air-landing brigade lacked the AT battery and engineer squadron, but eight AT guns were organic to each air-landing battalion's AA and AT company. The strength of the air-landing brigade was almost equal to that of the two parachute brigades combined:

British Parachute Brigade, 1944

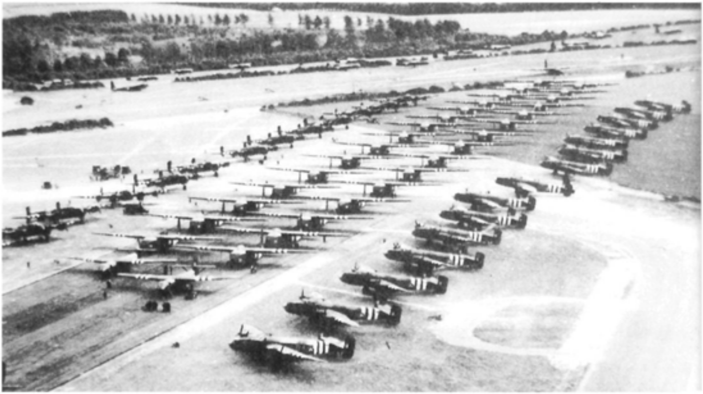
- Brigade HQ
- HQ Defence Platoon
- Parachute Battalion (x3):
  - Battalion HQ
  - HQ Company (8x 3in mortar, 4x medium machine-gun, 10x PIAT anti-tank projector)
  - Rifle Company (x3) (9x light machine-gun, 9x 2in mortar)
- Light Artillery Battery (6x 75mm pack howitzers)
- AT Battery (12x 6pdr anti-tank gun)
- Engineer Field Squadron
- Field Ambulance

The British 1st Airborne Corps and Troop Carrier Command were formed in 1943 to control the 1st and 6th Airborne Divisions and the new 1st Polish Independent Para Brigade, and served under the 1st Allied Airborne Army.

United States

In August 1942 the US Army organized the 82nd and 101st Airborne Divisions by splitting the 82nd Infantry Division. The three existing infantry regiments were converted to glider, with one transferred to the 101st and a new regiment activated; two existing parachute regiments were assigned, one to each division. The balance of glider and parachute regiments was thus the opposite of that in the British division. The Americans had brushed off British recommendations to follow their example, for which they could see no good reason; in fact this response was probably due to a more conservative reluctance to rely on a division predominantly of untried paratroopers. The airborne division roughly mirrored the infantry division, but its units had less strength, equipment and capabilities; an airborne division numbered 8,400 troops and 650 vehicles compared to the infantry division's 15,000 men and 2,000 vehicles. In 1944 a parachute regiment had 2,025 troops, against 3,258 in an infantry regiment. The new divisions were formed very much with economy in mind.

When committed, the divisions were provided with one or two more parachute regiments and artillery battalions, and lost a glider regiment, while the remaining one received a third battalion. At the end of 1943 it was recommended that the airborne division be increased in strength and equipment to almost that of an infantry division. Although this was opposed in some circles, new organization tables were approved at the end of 1944; the divisions were



This view is a reminder of the massive resources needed to mount major airborne assaults. For the Normandy operation the British division needed some 450 paratroop transports and glider tugs, the two US divisions about 820. Painted with D-Day recognition stripes, these British Horsa and Hamilcar gliders are lined up with their Halifax Mk V four-engine bomber tugs parked on either side. These Hamilcars delivered Tetrarch light tanks, 75mm pack howitzers and 17pdr AT guns of 6th Airborne Division to Ranville on the evening of 6 June 1944.

upgraded, and the ratio of parachute and glider regiments was officially reversed. A parachute regiment now had over 2,300 men, the glider regiment almost 3,000, and the division almost 13,000. The 17th and 13th Airborne Divisions were re-organized under this structure. The 11th Airborne Division in the Pacific retained the one parachute and two glider regiments, although the glider regiments had largely been parachute-trained. There was also a separate parachute regiment in the Pacific theatre, the 503rd Parachute Infantry Regiment.

US Parachute Infantry Regiment, 1944 (2,025)
Regimental HQ
Infantry Battalion (x3):
  HQ and HQ Company (8x light machine-gun, 4x 81mm mortar, 9x bazooka)
  Rife Company (x3) (12x light machine-gun, 3x 60mm mortar, 4x bazooka)
Service Company
Medical Detachment

After the poor performance of US airborne units in North Africa and Sicily, some opponents called for them to be converted to infantry, and a study was undertaken to decide their fate. It was determined that poor planning, weak troop carrier training, and the piecemeal employment of paratroopers were the problems, rather than any fundamental flaw. An exercise conducted in the US pitting the 11th and 17th Airborne Divisions against one another proved the validity of the units if properly trained and employed.

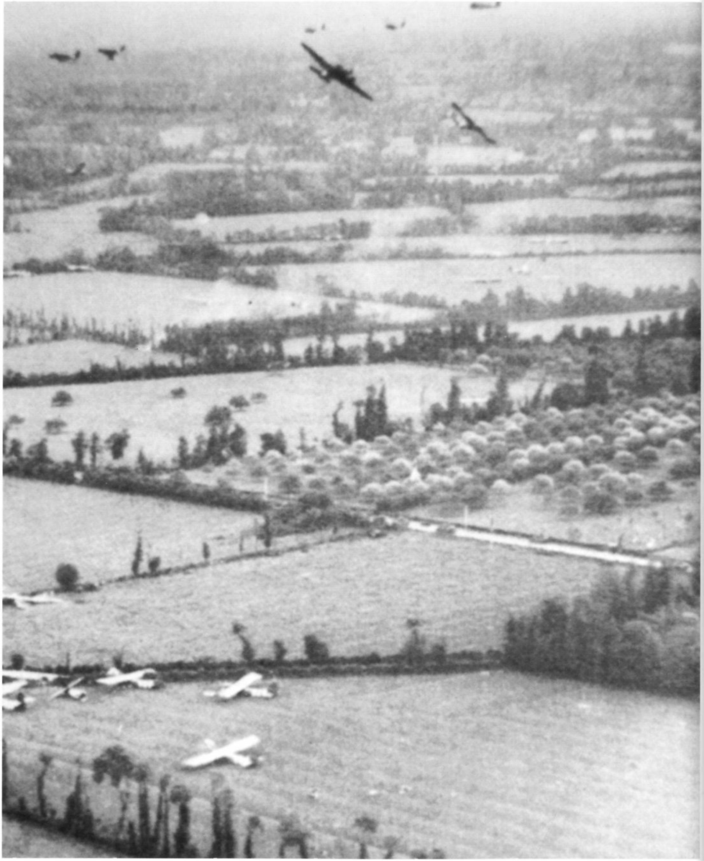
The US formed XVIII Airborne Corps in 1944; this and the IX Troop Carrier Command were under the 1st Allied Airborne Army. In 1944 a provisional airborne division was formed for the invasion of southern France – 1st Airborne Task Force; this included five US parachute battalions, one glider regiment and a British parachute brigade.

The four Marine parachute battalions never had the opportunity to conduct a combat jump. Operations were planned, but air distances, lack of sufficient aircraft, and changing tactical situations led to all being cancelled. Instead they conducted amphibious raids and diversionary operations, and fought as infantry. They were dissolved in February 1944, the troops being reassigned to new infantry regiments.

Execution of airborne operations

The execution of even a small airborne operation was a complex affair. It required training, rehearsals, practice jumps, extensive coordination with airlift units, air route planning, intelligence collection, selection of DZ/LZs and assembly areas, tactical plans, assembly and packing of supplies and equipment, movement to the departure airfields, deception efforts, weather considerations, constant changes and situational updates, marshalling area activities, and loading up.

While each country had its own procedures, military planning and operational principles are reasonably similar and based on logical steps, and there were many similarities. As the war progressed lessons were learned, refinements made, and more detailed and in-depth planning was undertaken as higher airborne command echelons were established. A misconception held by many is that a smaller airborne operation is comparatively quicker



and easier to plan than a divisional operation. While there are fewer troops and aircraft, all the same planning details and steps are required, whether for a company executing a raid or a division supporting the amphibious invasion of a continent.

The division's parent command directed the division staff to commence planning for a specific operation in the form of an operation plan or a directive message. Basic guidance and known information were provided, with additional instructions and intelligence information as it became available. Often multiple or alternative plans were ordered to be developed. Planning might be halted as operations were deemed unfeasible due to insufficient resources, expected opposition, terrain and weather limitations, or rapidly changing situations. Typically, an airborne division might be directed to develop dozens of plans before one was actually executed. Projected dates would be provided, and it was the higher headquarters that dictated whether it would be a day or night operation, and allocated airlift assets. This latter had a central influence on how an operation was conducted: the numbers and types of transports and gliders completely governed delivery to the battlefield, sustainment and support.

Weather was extremely critical: rain or fog can hide landmarks and DZ/LZs; winds over 15mph prevent parachute drops, even moderate winds can seriously affect gliders, and higher-altitude winds can blow transports off course. Weather conditions were monitored up to drop time, but it was difficult to determine conditions in drop areas behind enemy lines. While favourable conditions might exist for the drop, the extended forecast following it was critical to resupply and reinforcement drops and air support.

Opposite
C-47s release their Waco gliders over Normandy hedgerow country. Regardless of the hedgerows, flooding, and 10ft (3m) poles planted in fields, there were still enough clear LZs for most glider landings to succeed.

Selecting DZ/LZs

The general objectives and targets were specified by higher commands, but it was normally left to the airborne and airlift units to determine the exact DZ/LZs. These were selected based on the size of available clear areas, and extent of natural and man-made obstacles; proximity of enemy forces and installations, air defence and airfields; location of civilian communities; ease of identification of DZ/LZs and en route landmarks from the air; distance from the objective; proximity to cover and concealment; suitable assembly areas, and road networks that could be used by the force once on the ground.

The distance from the objectives and intervening terrain, obstacles and roads were critical, since airborne troops are mostly heavily loaded foot-sloggers. In some instances it might be desirable to land directly on the target, but this was usually only suitable for raids against lightly defended sites. A DZ/LZ a short distance from an objective was more practical, as it was out of range of infantry weapons and might not be observable depending on terrain and vegetation. It had the advantage of allowing the unit to assemble, collect supply containers, organize, assess the situation, and move only a short distance to begin its mission. Due to the extent of defences, other enemy units and installations in the surrounding area, terrain, built-up areas, and the need to select a central DZ/LZ for multiple objectives lying in different directions, a unit might have to be inserted a considerable distance from the objectives. Notoriously, in September 1944 the British 1st Airborne Division at Arnhem was forced to use DZ/LZs on heathland 4–6 miles from the objective bridge because of built-up areas and woodland. The alerted Germans had time to respond, blocking movement to the objective. They were later able to block the 2-mile route between the supply drop point and what became the main airborne perimeter around Oosterbeek.

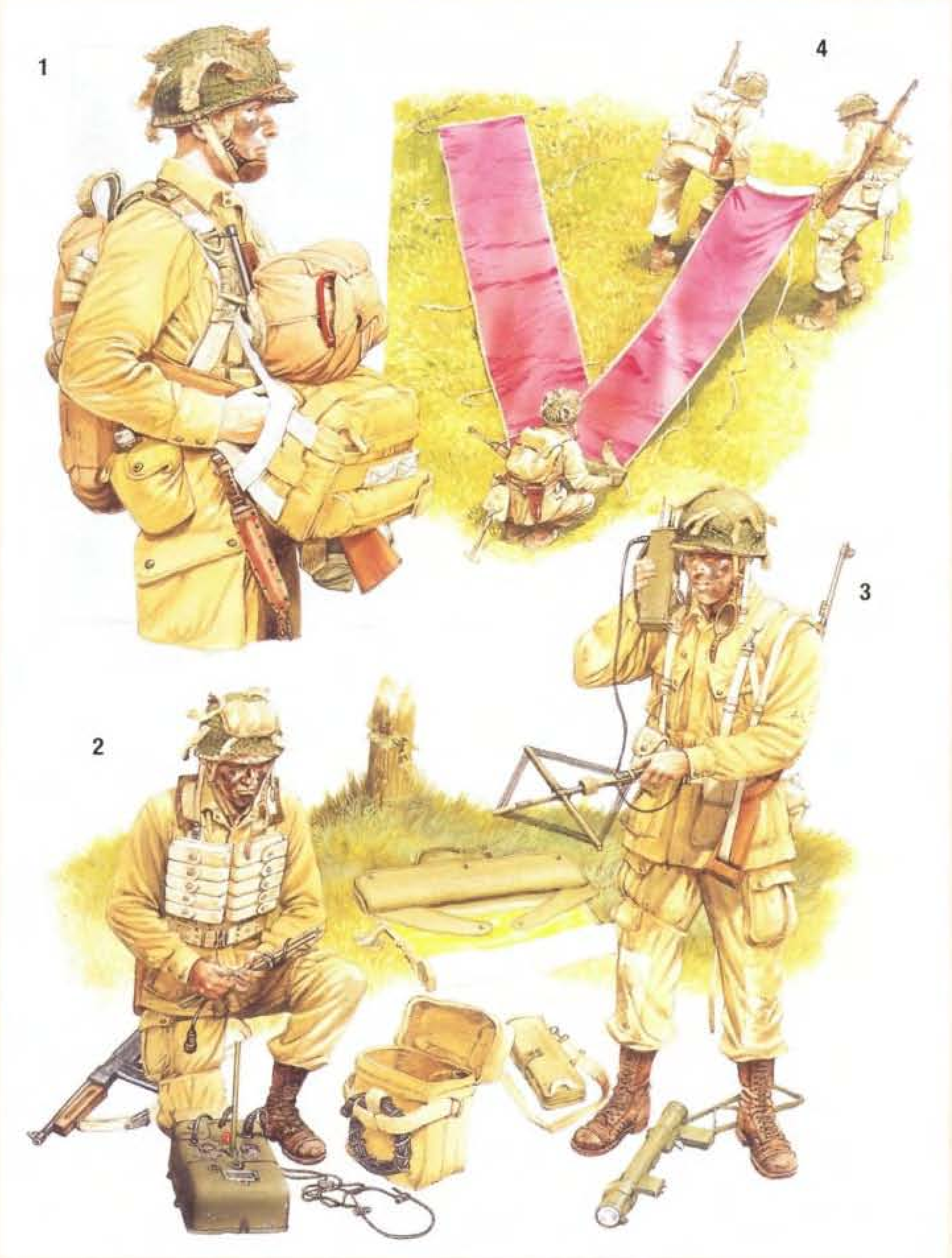
Planning and marshalling

In most cases airborne units were allowed to plan their own actions once on the ground, although these obviously had to be coordinated to achieve the link-up with the advancing ground force. (Paratroopers could not go about simply blowing up random bridges that the ground force might need for its advance.)

One of the major benefits enjoyed by airborne forces was the element of surprise. There were simply far too many ways and places they could be employed for the enemy to be able to plan effective countermeasures and defences for them all. To preserve this vital advantage, the planning of airborne operations and the marshalling of units and aircraft were kept

US PATHFINDERS, NORMANDY, JUNE 1944

The PPN-1 and PPN-2 radio beacon or Eureka transmitter sent a signal to the Rebecca receiver carried aboard lead transports. (**1**) shows a rigger-made harness attachment for the PPN-1; (**2**) illustrates the similar PPN-2 being unpacked and set up (note the trooper's improvised ten-pouch rig for Thompson magazines). (**3**) holds the standard SCR-536 'handie-talkie' radio modified to take the BC-619 antenna so as to function as a homing transmitter; at his feet note also the M227 signal lamp, which could be used from the shoulder or set up on a tripod. (**4**) shows pathfinders unrolling an AL-140 high-visibility cerise-red signal panel used to mark specific DZ/LZs and to signal other messages. Side tapes allowed the panel to be pegged down. Flashing beacon lights, coloured smoke grenades and fire pots were also used by pathfinders. (Peter Dennis © Osprey Publishing Ltd)



secret. Deception operations were also mounted, with air attacks on adjacent areas, bombers splitting off from troop carrier formations to follow misleading routes, dropping 'chaff' to confuse radar and even dummy paratroopers. Troops would not be told what the objective was until just before the operation, in some cases not until they took off.

Even though the troops might not know the exact objective, extensive training and rehearsals were usually conducted. Because paratroopers can lose their leaders on the drop, or simply fail to link up, each man had not only to know his own job but also to have a clear picture of his subunit's role.

A short time before the operation commenced airborne units were moved to the departure airfields and detailed coordination was conducted between the jumpmasters and aircrew, between glider pilots and tug pilots. Security had to be maintained at the airfields, while messing and quartering were arranged. Parachutes, drop containers and other special equipment were issued along with ammunition, rations and medical supplies. Containers and individual equipment were packed, and equipment secured in gliders. Last-minute briefings were conducted and the most recent aerial photos of the target area distributed.

Pathfinders

A critical feature of the plan was the marking of DZ/LZs. After Sicily the Americans and British used pathfinders – small teams of specially trained paratroopers who would jump in early to mark DZ/LZs. They had little time to find the correct zones and mark them while avoiding enemy contact. US pathfinders were small provisional teams formed from men drawn from parachute regiments; British airborne divisions had an organic 'independent company' with assigned pathfinders. They would be dropped by specially trained pathfinder transport crews with skilled navigators.

The Russians sometimes had partisans mark DZs, but with mixed results; the Germans and Japanese dropped 'blind'. The Japanese, conducting small-scale daylight operations, generally found their DZs located adjacent to easily locatable objectives or landmarks; a reconnaissance plane with an expert navigator aboard would lead the formation to the DZ. The Germans used similar methods, and also tried using the same technique as for night bombing: the lead aircraft would signal by radio for all transports to drop their troops, but this gave unsatisfactory levels of accuracy. In 1943 they tested a radio buoy (*Funkboje*), a short-range radio packed in a shockproof container which was dropped on the DZ by the reconnaissance aircraft; transports were to drop when they over-flew the signal, but the project was never fully developed. During the Ardennes drop preceding bombers dropped incendiary bombs on either side of the DZ to create two incendiary bomb fields (*Brandbombenfeld*) between which the transports were to drop; this, too, proved unsuccessful, due to US air defences and poorly trained aircrews.

The drop

As mentioned, transport crews needed high levels of skill in navigation and tight formation flying to ensure that jumpers landed in relatively close proximity to one another. Pilots had to achieve the required jump altitude at the necessary time (depending on the situation, transports might approach the DZ higher or lower than the jump altitude), before throttling back to the slower drop speed (100–120mph). They had to coordinate effectively with the jumpmaster, signal the exit at the proper time, maintain straight and level flight while the paratroopers jumped, and drop external equipment containers.

The transport formation depended on the size of the DZ. Aircraft might travel in single file, up to five abreast, or in a 'V' formation. The interval between each aircraft or 'V' was at least 100–200 yards (91–183m), allowing jumpers in the leading aircraft to fall low enough to avoid the following aircraft. In tight formations, in order to place as many troops on the ground in the shortest possible time, each following 'V' might be about 50ft (15.2m) higher than the preceding one. Squads/sections/groups were kept together aboard a transport or glider, but unit headquarters personnel and crew-served weapons were split and cross-loaded aboard different craft so that not all would be lost if an aircraft was shot down. A machine-gun crew or a few men from the company headquarters might jump in the same stick as a rifle squad.

The eight to 18 paratroopers generally carried by most period transports were alerted some minutes out from the DZ. They stood, checked each other's equipment and parachutes, hooked up their static lines to the anchor cable, manoeuvred drop containers into the door, and stood by. The pilot signalled the jump with a coloured light. In the early days jumps were conducted at up to 1,000ft (305m), but 450–600ft (137–183m) altitudes were soon adopted to reduce the amount of dispersal and limit exposure time to ground fire. While there were instances of descending paratroopers being hit by such fire, this was actually rare, and significant casualties were uncommon – a man falling (and swinging) at about 16ft (5m) a second is a very difficult target, and from 400 to 500ft (122 to 152m) he is only in the air for between 20 and 30 seconds.

Paratroopers were more concerned about trees, power lines and buildings (though trees are not necessarily as dangerous as sometimes assumed; paratroopers are taught how to prepare for tree landings, and are fairly well protected by their harness, parachute packs and equipment). Deep water obstacles are always a concern for heavily loaded jumpers. Although they were issued inflatable life jackets, if a man came down in deep water he had virtually no chance of freeing himself from his harness in time to use it. While there were drownings among paratroopers in the shallowly flooded areas of Normandy, the real problem with these was that they hindered ground movement, although a great deal of equipment and many crew-served weapons were lost in the water.

Speed is essential when exiting the aircraft; a rate of one man per second is normal, and there is certainly no time for the hesitations or final encouraging words seen in Hollywood movies. The DZs were typically small; an aircraft would be across it and beyond in seconds. Rapid exits also ensured tighter landing of sticks for rapid assembly; ideally a plane-load landed over a spread of about 200–300 yards (180–270 metres).

A parachute jump is an experience of wild contrasts. One moment the heavily burdened jumper is inside a noisy, crowded aircraft under intense pressure; he makes an adrenalin-charged leap, welcomes the uncomfortable but reassuring opening shock, and then experiences a pleasant floating sensation, in a silence broken only by the quiet receding drone of aircraft. His view is grand and all-encompassing. He checks his canopy, looks around to ensure that he will not collide with other jumpers, tries to orient himself, perhaps releases a leg-bag of equipment on the lowering line – and then the earth rushes up towards his eyes, and knocks him over into an often-rehearsed tumbling roll. Landing with a full load of equipment can be a bruising experience, but not overly so.

Assuming he was not injured, the paratrooper collapsed the canopy (to drag it out of sight, time permitting); unclipped the chest pack, and released the harness buckles to struggle free; collected his gear in the drop bag; and went in search of the rest of his stick and the separately dropped containers. His training had emphasized making his way to the assembly area as rapidly as possible. A few seconds after enjoying a bird's-eye panorama of the surrounding area, the paratrooper was now among confusing trees and hills, unable to make out landmarks. Soldiers eventually learned to select routes and assembly areas based on the natural flow of terrain.

Well-trained paratroopers knew to go toward the 'sound of the guns', collecting together in groups irrespective of what subunit they belonged to, and following whoever was senior even if he was an officer or NCO they had never seen before. That is why training, rehearsals, and the full knowledge of unit plans were so critical for paratroopers. Units could not afford the time to collect all personnel and equipment; they went into action with whatever they had and whoever they met.

It was originally envisioned that most parachute operations would be at night. This was an obvious necessity for raids, but for larger operations it was not always practical. Darkness made it difficult for the enemy to detect aircraft, the jump's location and its strength, and almost impossible to fire at men while they were descending; it also covered their movement on the ground and subsequent operations. However, night operations virtually ensured that DZ/LZs were missed; they were especially dangerous for gliders, and made assembly and movement to objectives extremely difficult. Paratroopers conducting subsequent ground operations were just as handicapped at night as other troops. Daylight operations ensured location of DZ/LZs and greatly eased assembly and movement.

Engagement

Once on the ground, airborne units used standard infantry tactics, allowing for differences in organization and available weapons, and compensating for their lack of heavy weapons support with aggressiveness. They also expected to fight outnumbered and possibly encircled; while it was seldom that they were completely surrounded, paratroopers did have to consider their exposed flanks and rear more than line infantry. They often had little if any reserve because of scattered and missing elements. What reserves there were had to secure the flanks and rear, tasks which were also given to headquarters and service elements. Assembled though under strength, units would press on to their objectives and engage the enemy. Casualties would be suffered, but the engaged units would be reinforced steadily by a trickle of stragglers coming in. Once their objective was secured, paratroopers would proceed to other objectives, or establish a defence and await relief by ground forces. They tended to protect their lodgement with aggressive patrols, a legacy of the old raider doctrine. Rear detachments and support units would eventually arrive by ground or sea transport to augment the air-delivered units.

Once relieved by the ground force, the paratroopers (in theory) would be withdrawn and returned to base for rebuilding and preparation for the next mission. This sometimes occurred; Japanese and early German operations were so conducted. More often than not, however, US, British and Soviet paratroopers continued to fight for prolonged periods.

PART I

GERMAN AIRBORNE FORCES

The great moment has arrived and an instructor checks his recruits' equipment before their first jump. (Courtesy of Christopher Ailsby Historical Archives)

FALLSCHIRMJÄGER

Bruce Quarrie

Recruitment and enlistment

'Die Fahnen hoch, die Reihe dicht geschlossen!'
('The flags held high, the ranks stand tight together!')
First line of the song written in memorial to SA stormtrooper Horst Wessel, which became something of a Nazi anthem.

Prospective volunteers for the Fallschirmtruppen in early 1939 were sent to the town and airfield of Stendal, some 60 miles (90km) west of Berlin – the home of General Kurt Student's slowly growing 7th Flieger Division.[1] At this time, the division was only two battalions strong, but there was the normal degree of attrition and, in any case, Student had his eyes firmly focused on expansion, because everyone knew that a war was on its way. Arriving at Stendal, one would typically find oneself part of a group of a dozen or so young men in a variety of uniforms, mostly air force but including a sprinkling from the army and the odd naval rating. They were driven by truck to the airfield, and then escorted by a corporal to the barracks hut they would share during the test programme that would determine their suitability as potential paratroopers. An exhausting mental and physical curriculum was spread over several days, and those who passed soon found out that the parachute school's own eight-week training programme was in some ways even harder. Before the trial by ordeal began, though, there was a thorough medical check. Firstly, anyone weighing over about 185lb (85kg) was told to lose weight quickly 'or else', because that was the maximum safe lifting capacity of the parachute then in use, the RZ 1. There was also an air experience flight in an ageing Dornier. For most, this was an exhilarating first-time experience, but those who became dizzy or were sick were downgraded, because sickness causes dehydration and paratroops have to be fully fit and alert when they land. Fear of heights was also tested by making candidates jump into a tank of water from a 50ft (15m) tower. Then came long cross-country runs and obstacle courses, both tackled against the clock and each other, individually or in teams; these tested

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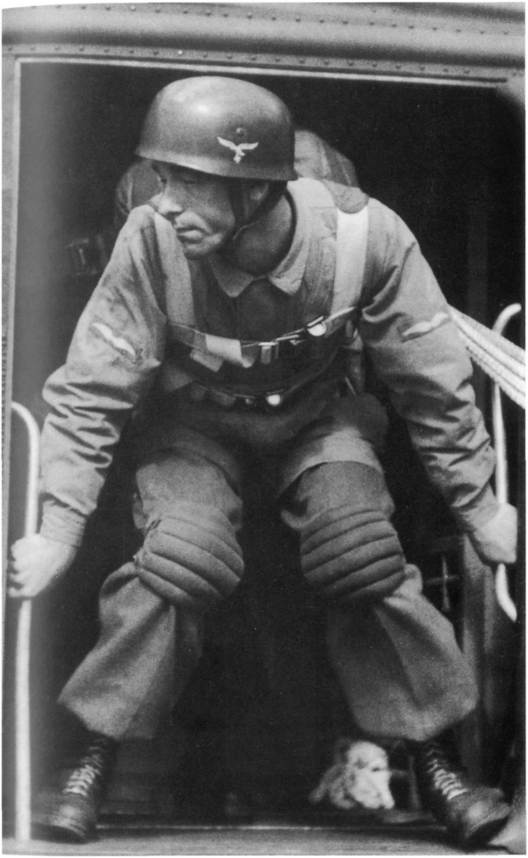
[1] *This was deliberately misleading to potential enemy intelligence services since there were no numbers 1–6.*



The correct posture for exiting a Ju 52 is demonstrated by former German heavyweight boxing champion Max Schmeling, an early volunteer for the Fallschirmtruppen. Although static lines can be seen to his left trailing out of the doorway as though a number of men have already jumped, this photo was obviously posed on the ground and he is not wearing his gauntlets. Note second pattern front-lacing boots. (Courtesy of Christopher Ailsby Historical Archives)

CHRONOLOGY

1933

February	Hermann Göring forms Polizeiabteilung (Police Detachment) 'Wecke' (later renamed Landespolizeigruppe [Provincial Police Group] 'Wecke'), which includes a small parachute-trained air section (Luftaufsicht).

1935

February	Luftwaffe brought into existence headed by Reichsmarschall Göring.
March	Landespolizeigruppe 'Wecke' renamed LPG 'General Göring', which is later transferred from police to Luftwaffe control.

1936

January	LPG 'General Göring' renamed Regiment 'General Göring'. A German parachute corps is inaugurated and volunteers are called for to establish a Fallschirmschützen Bataillon (Parachute Rifle Battalion).
Summer	OKH (Oberkommando des Heeres, or Army High Command) also calls for volunteers to form a new Schwere Fallschirm Infanterie Kompanie (Heavy Parachute Infantry Company).

1938

April	Fallschirmschützen Bataillon detached from Regiment 'General Göring' to become I Bataillon, 1st Fallschirmjäger Regiment (I/FJR 1). The Schwere Fallschirm Infanterie Kompanie is expanded to a battalion.
July	Generalmajor Student given responsibility for forming 7th Flieger Division.

1939

January	Student appointed Inspekteur der Fallschirm und Luftlandetruppen (Inspector of Parachute and Airlanding Troops). Heidrich's Army parachute battalion absorbed by the Luftwaffe as II Bataillon, 1st Fallschirmjäger Regiment (II/FJR 1).
August	Approval given to begin raising a third battalion for 1st Fallschirmjäger Regiment (III/FJR 1) and a second regiment (FJR 2), all as part of 7th Flieger Division.
November	Student begins forming Sturmabteilung (Assault Detachment) 'Koch' from elements of I/ and II/FJR 1.

1940

April	Denmark: Nr. 4 Kompanie of I/FJR 1 captures airfields and bridge. Norway: Nr. 2 Kompanie seizes airfield, while Nr. 3 Kompanie helps capture another airfield. Nr. 1 Kompanie forced to surrender by British troops.
May	Holland: FJR 1, excluding Sturmabteilung 'Koch', and FJR 2, capture bridges and airfields. Belgium: Sturmabteilung 'Koch' takes Eben Emael and bridges.

1941

May	Crete: FJR 1, FJR 2 and FJR 3 complemented by the descendant of Hauptmann (now Major) Koch's 1940 Sturmabteilung, expanded into Luftlande-Sturm (Airlanding Assault) Regiment. Glider-borne and parachute assaults launched, followed by air- and sea-landed troops of 5th Gebirgs (Mountain) Division.
September	Russia: 2nd Battalion of Meindl's Sturmregiment precedes bulk of 7th Flieger Division to Leningrad front.
December	Sturm's reinforced FJR 2 sent to the Ukraine; the rest of 7th Flieger Division is pulled back.

1942

March	Regiment 'General Göring' expanded into Fallschirm Brigade 'Hermann Göring'.
August	Africa: Fallschirm Brigade 'Ramcke' flown to Tobruk to bolster Afrika Korps' drive on the Suez Canal and Cairo.
October	Russia: 7th Flieger Division sent to Smolensk front and later renamed 1st Fallschirmjäger Division (1 FJD).
November	Egypt/Libya: 'Ramcke' Brigade renamed 2nd Fallschirm Brigade. Tunisia: Further Fallschirmtruppen airlifted into Tunisia to reinforce Armeegruppe (Army Group) 'Afrika'.

1943

January	Fallschirm Brigade 'Hermann Göring' expands to Fallschirm Division 'HG'.
March–April	1 FJD and Kampfgruppe (Battlegroup) 'Sturm' brought back from Russia. Ramcke's and Sturm's brigades form nucleus of new 2 FJD

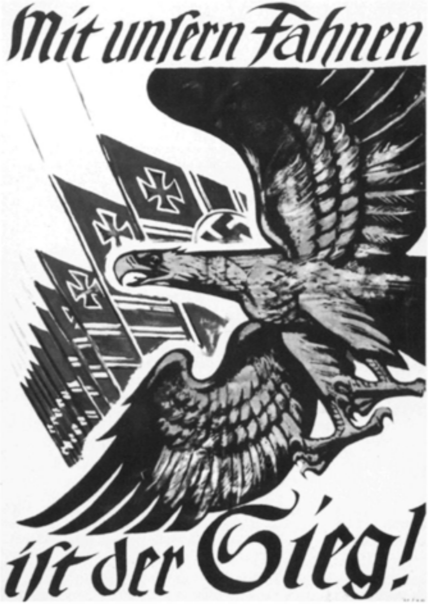
	commanded by Ramcke. Reconstruction of 1 FJD and 'HG' Division begins. New 5 FJD forms around cadre of XI Fliegerkorps' Lehr (Demonstration) Bataillon.
July	Sicily: FJR 3 and 4 airlifted in to reinforce 'HG' Division. Ramcke's 2 FJD moves to outskirts of Rome.
September	Italy: Allied forces invade and Badoglio signs the armistice. 1 FJD opposes British Eighth Army landings; 2 FJD occupies Rome. 'HG' Division spearheads counter-attack against US Fifth Army beachhead at Salerno. Men of FJR 7 free Mussolini.
October	3 FJD forms around cadre from FJR 1. 'HG' Division taken out of the line.
November	4 FJD forms around nucleus from 2 FJD. Russia: 2 FJD posted to Zhitomir front.
December	2 FJD airlifted to Kirovgrad and takes heavy casualties during fighting.

1944

January	Italy: 1 and 4 FJD fall under aegis of new I Fallschirmkorps. 'HG' Division and 4 FJD spearhead counter-attack against Allied beachhead at Anzio.
February	1 FJD takes up defence of Cassino and Monte Cassino.
March–April	Heidrich's men repulse Allied attempts to take Cassino positions. 'HG' Division taken out of the line and renamed 1 Fallschirm Panzer Division 'HG'.
May	'HG' Division rushed into counter-attack when Allies break out of Anzio beachhead, but is forced to fall back. Order to evacuate Cassino positions. France: Survivors of 2 FJD repatriated to Germany. Yugoslavia: 500 SS-Fallschirmjäger Bataillon lands near Tito's headquarters.
June	Italy: Rome falls. 1 FJD transferred to Adriatic sector. France: Allied forces land in Normandy; only Fallschirmjäger unit facing them is FJR 6. II Fallschirmkorps moves to Normandy with 3 FJD in St Lô sector and 5 FJD outside Caen. An embryo 6 FJD forms in northern France.
July	3 FJD takes and inflicts heavy casualties during battle for St Lô. 5 FJD also heavily engaged. 'HG' Division pulled out of Italy.
August	Bulk of 3 and 5 FJD decimated in Falaise pocket while 6 FJD battles in front of Paris. Allies lay siege to Brest, defended by 2 FJD. Poland: 'HG' Division falls back.
September	Ramcke surrenders Brest. 6 FJD reduced to two battalions.
October	Eastern Front: Expansion of 'HG' Division into a Korps consisting of 1 and 2 Fallschirm Panzer Divisions. Western Front: 3 and 5 FJD committed to action against Allied forces in Holland and Alsace. New 2 FJD is constructed.
December	3 and 5 FJD rebuilt and form part of Sixth Panzer and Seventh Armees for the Ardennes offensive. Latter division helps delay Patton's Third Army as it struggles to relieve Bastogne. 3 FJD helps to delay Hodges' First Army during its advance to the Rhine. Supplementary parachute drop by a special detachment causes American panic. New 8th Fallschirmjäger 'Division' forms at Köln-Wahn.

1945

January	Eastern Front: The two 'HG' divisions are encircled by Soviet forces.
February	Western Front: 7 FJD delays British XXX Corps.
March	Western Front: 3 and 5 FJD virtually annihilated west of the Rhine. The few survivors meet their end in the Ruhr pocket, along with those from 2 FJD. Eastern Front: Survivors of two 'HG' divisions evacuated.
April	Italy: 1 and 4 FJD surrender. Eastern Front: Remnants of 'HG' divisions surrender to Red Army troops. Newly created so-called 9th Fallschirmjäger 'Division' destroyed as Soviets drive on Berlin, and the same fate befalls the 10 Fallschirmjäger 'Division' in Czechoslovakia.
May	6 FJD, 7 FJD and 8th Fallschirmjäger 'Division' all surrender.



German recruiting posters emphasized aggression with the swooping eagle denoting triumph. The caption on this early war example reads, 'Victory follows our banners'. (Author's collection)

natural aggression, will to succeed and the ability to work with others. The latter was particularly important because the volunteers came from many different parts of Germany, which in itself was a novel experience for most of them. Since conscription through the Wehrkreise was on a regional basis, all the men had shared at least some local affinity in their parent units. Now someone from Prussia, say, might find himself teamed up with a Bavarian, and each would have to learn to understand the other's dialect.

Other tests designed to highlight leadership qualities looked for initiative and imagination. Manual skills, such as field stripping and re-assembling weapons – again, against the clock – came under scrutiny too. There were also both written and oral exams on subjects as diverse as military law and National Socialist history and doctrine. The latter were not just to test candidates' knowledge, but also their literacy and fluency. If a candidate were to volunteer for transfer to the 'Hermann Göring' Regiment he would have found the entry requirements even tougher because they also involved investigation into each man's racial 'purity'. As it was, strange though it may seem, the Fallschirmjäger even accepted a tiny minority of men with Jewish ancestry.[2]

The test, though, which caused many men to drop out voluntarily and others to be returned to their original units (RTU'd) as good soldiers but unsuitable paratrooper material, was the interview, which was conducted by Major Richard Heidrich in most cases. Major Heidrich was CO of II Fallschirmjäger Bataillon, and he was also at the time in charge of processing new intakes (*Kommandeur des Neuaufzustellenden*). Men who kept their nerve and passed this test were accepted, however provisionally, into the Fallschirmtruppen, a new elite force that would be involved in some of the most daring actions of the war.

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[2] *Evidence for this comes from Friedrich Freiherr von der Heydte, a Fallschirmjäger icon who post-war became a Fellow of the Carnegie Endowment for International Peace. In his fine book* Dædalus Returned *(Hutchinson, 1958), he recalls that, 'I had two Jews in my regiment [FJR 6]. Both used false names. One was the nephew of Albert Schweitzer and the other was the son of a German aristocrat whose mother was Jewish.'*

Newly trained Fallschirmjäger recruits, a couple of them still a little uncertain, march proudly beneath Nazi banners during a pre-war parade. (Courtesy of Christopher Ailsby Historical Archives)

Belief and belonging

'This new Reich will give its youth to no-one, but will itself take youth and give to youth its own education and its own upbringing' (Dr Bernhard Rust).

Dr Rust, who had been sacked from his post as a provincial schoolmaster on the grounds of mental instability, frequently used words from Adolf Hitler's writings and speeches, which he turned into his own, as above. Hitler's rewards for Rust's dog-like devotion and fanaticism were to elevate him first to Prussian Minister of Science, Art and Education and then to Reich Minister of Education in 1934. Dr Rust may have lacked talent, but he was a racist, and his prejudice was sufficient qualification for him to succeed politically and materially in the Germany of the mid-1930s. Unfortunately, Rust's warped mentality gradually pervaded almost every sphere of German life, including the lives of school-aged boys.

German compulsory education for boys at the time extended until the age of 18, after which – following Hitler's rise to power – all young men had to join the Wehrmacht (Armed Forces, excluding the Waffen-SS) or do a term of service in the *Reicharbeitsdienst* (Reich Labour Service). The former was the more glamorous option which most elected for if given the choice. The resurgent tide of nationalism affected all Germans in the 1930s, and permeated the whole educational system. Schooling throughout Europe was, in any case, far more authoritarian than it is today and, particularly in Germany, the emphasis was firmly on duty and obedience to God and country, teachers, parents and policemen. The values of the education system, coupled with the nation's predominantly Lutheran faith, played straight into the hands of Hitler and his 'spin-doctors'.

Bernhard Rust was not alone amongst the deranged elements insidiously infiltrating themselves into the fabric of German society. The Protestant army *Geistliche* (Chaplain), Ludwig Müller, who had since 1932 effectively led the German Christians' Faith Movement and at Hitler's instigation became the first *Reichsbischof* (Reich Bishop), was also a significant figure. Müller and his followers, and there were many amongst the 45 million Protestants in Germany, firmly believed in religious freedom so long as it was not, to quote Hitler, 'a danger to the moral feelings of the German race'.[3] Religious freedom, of course, did not extend to Jews, but there was ample precedent for this. Martin Luther, the principal founder of Protestantism, had railed viciously against Jews (and gypsies) in the 16th century. His teachings also stressed the need for law and order, and obedience to the legally appointed authorities. Thus, even though one of Hitler's eventual secret aims was the abolition of Christianity and its replacement by a form of National Socialist paganism in line with the Aryan myth, the Protestant church became an ally alongside the schools in the indoctrination of a generation.

There were, of course, other voices in Germany at the time advocating something different from Rust's 'liquidation of the school as an institution of intellectual acrobatics' or Müller's Nazified Christianity.[4] Many church leaders, while initially welcoming Hitler's rise to power, found themselves gradually forced to stand against him. For their pains, most lost their jobs or worse. One such was Pastor Martin Niemöller, a World War I U-boat hero, who became their effective spokesman and, as a result, lived out the war in a succession of concentration camps. Many schoolmasters suffered similar fates, but the majority (97 per cent) bowed with the wind and joined the Nazi *Lehrerbund* (a form of teachers' union) after a month-long ideological training course organized by the Party.

The infighting between the church, the schools and Nazi officialdom passed with little reaction from the man in the street, partly as a result of censorship but predominantly through simple apathy. The children and teenagers who would form the bulk of the German fighting forces in World War II knew little about it and cared even less, nor did they usually even realize its effects, because the changes in their upbringing were not, initially, cataclysmic.

Sport had always been stressed in German schools, and a renewed emphasis on physical fitness went unnoticed by most and was probably welcomed by the less academically minded. Similarly, few noticed that the teaching of history altered to give even more emphasis to Germanic achievements, particularly those in medieval times, and a more political slant favouring Nazi ideals. Religious education lessons became fewer and shorter, and emphasis was placed on eugenics in biology classes, in keeping with the ideal of the Master Race.

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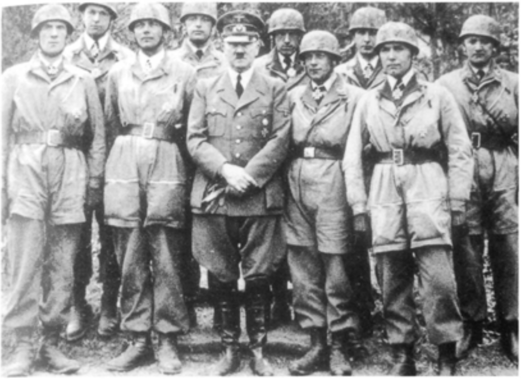
3 Hitler himself had been brought up as a Roman Catholic and established an uneasy alliance with the Vatican by agreeing, through the Concordat of July 1933, not to interfere with the religious freedom of German Catholics so long as their priests did not get involved in politics.

4 It can be noted that both Müller and Rust committed suicide rather than face imprisonment after the war.



Nine men from Sturmabteilung Koch were personally awarded the Ritterkreuz by a delighted Hitler. From left to right they are Leutnant Egon Delica, Oberleutnant Rudolf Witzig, Hauptmann Walter Koch, Oberleutnant Otto Zierach, Leutnant Helmuth Ringler, Leutnant Joachim Meissner, Oberleutnant Walter Kiess, Oberleutnant Gustav Altmann and Oberarzt Dr Rolf Jäger, the team's doctor. (Signaal)

One change in the life of a teenager which did not pass unnoticed was membership of Baldur von Schirach's[5] Hitler *Jugend* (Hitler Youth). This movement had been started in 1926 as a junior section of the SA, the *Sturmabteilung* (Storm Troop), and, while borrowing much from the Boy Scouts, had a much more militaristic ethos. Membership from the age of 15 was made compulsory in 1936 and parents who objected were heavily fined. Prior to 1936, the boys may have been voluntary members of the *Jungvolk* (Young Folk), which embraced 10- to 14-year-olds. Activities in both included running, swimming and other athletic pursuits, weekend cross-country camping hikes with map and compass, learning and practising semaphore, and arms drill, including range practice. In addition, classroom sessions emphasized Nazi doctrine and Party history, with endless readings from Hitler's *Mein Kampf* (My Struggle), and every boy had to learn the Horst Wessel song by heart. Older youths in the Hitler Jugend were given time off regular schooling for summer camps or attendance at Party rallies, and most wore their uniform and ceremonial dagger with immense pride. Those who did not, or otherwise showed they were unresponsive to the Nazi programme, ended up in the labour service when they reached the age of 18.[6]

To be soldiers in the Wehrmacht, young men had to demonstrate attentiveness and instant obedience to orders, qualities which were both a great Germanic weakness in social terms and a strength in militaristic ones. But, if the regime seems doctrinal and harsh, the education systems in other European countries of the time differed little, except in the political sense. Boys simply did what they were told, and if they erred they were punished physically at school and often suffered even worse at home when their fathers discovered their transgression. In this way, Adolf Hitler and those who wormed their way into power on his bandwagon simply took the status quo and adapted it to their own ends.

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[5] *Sentenced to 20 years' imprisonment after the first Nürnberg Trials.*

[6] *There was always an element of resistance to the Hitler Youth movement, and a special section was even created in the RSHA (Reichsicherheitshauptamt, or Main Office of Reich Security) to investigate and deal with juvenile malcontents. 'Crimes' for which many were imprisoned or hanged included distributing anti-Nazi literature or even just listening to the BBC.*

The German nation as it existed in the 1930s and 1940s was a mere youth itself in the global context, having only been brought into political existence by Bismarck less than a century earlier. Nevertheless, this sense of achievement on the world stage was a strong motivation for the majority of people, helping to engender a sense of destiny in which belief and acknowledgement of belonging to something greater than oneself are paramount. The débâcle of World War I, following two sweeping victories within living memory over Austria and France, and the ignominious, punitive terms of the Versailles Treaty had provoked enormous resentment, which Hitler and the Nazis used to their advantage during and after their rise to power. This same sense of resentment was passed on to young men in the years preceding World War II not only at school and in the Hitler Jugend, but also through parents and parish priests. What they saw in Adolf Hitler's Third Reich, therefore, was enormous forward progress on the home front and in Germany's relationships with other countries. Even people who harboured private doubts about much of National Socialist theory and doctrine recognized that achievements had been made, with regular pay packets now replacing the unemployment and inflation which had crippled the country such a short while ago. From their point of view the Fatherland was strong, prosperous and influential.

The end result was that most young men felt that what the State was doing was right. They also agreed with Hitler's decision to reintroduce conscription in 1935, and most concurred with the view that service in the armed forces was natural, that those who went into the labour corps or the 're-education centres' (which ended up as concentration

A well-defined sense of chivalry led the Fallschirmtruppen to treat wounded prisoners with consideration, as shown in this relaxed group on Crete in 1941. (Courtesy of Christopher Ailsby Historical Archives) camps) were weaklings who deserved it, and that they were going to do their best to make their parents and mentors proud.

Boot camp is much the same in any army, and after the discipline of school and in the Hitler Jugend, most recruits took to the early morning reveille, the spit and polish, the constant callisthenics and drill, the lectures and interminable route marches like ducks to the water. What changed after basic training, and even more so after being selected for an elite body of men such as the Fallschirmtruppen, was that recruits came across veterans from World War I and the inter-war Reichswehr, whose attitudes contradicted much of what the youngsters had been taught.

As a generalization the Wehrmacht, and in particular the Heer, had an ambivalent attitude towards the Nazi Party. The majority of seasoned officers and NCOs may have applauded the growth in their numbers and influence, and the introduction of so much new technology, but they distrusted Hitler's motives. There were too many new concepts to assimilate, such as *Lebensraum* (Living room) and *Weltanschauung* (World view), and they were concerned where the Führer's ambitions might lead them. Thus, even while most welcomed the drift to war after the relatively uneventful takeovers of Austria and Czechoslovakia, they radiated an aura of world-weary cynicism that soon communicated itself to the new recruits in their midst. Young soldiers of a sensitive nature were left to decide who to believe. Fortunately, there was a practical solution, because a man's regiment soon became not only his family but also his *raison d'être*, even though he was obliged to continue to give lip service to National Socialism and had his oath to the Führer to live up to.

Some men remained fervent Nazis throughout the war, but the majority in the Fallschirmtruppen, judging from both diaries and post-war writings, rapidly lost their enthusiasm once the euphoria of the early victories had faded and campaigning became a simple struggle for survival. Unsurprisingly, this stimulated a return to earlier roots, and Sunday church meetings in the field, presided over by the regimental chaplain, were always well attended. Similarly, men learnt to catch up on sleep with their eyes open during the ongoing political lectures.

Two last factors were crucial in the moulding of a Fallschirmjäger. They were a sense of comradeship, and one of chivalry. Both came from the same source: a firm belief in oneself, from which stemmed a very strong 'do as you would be done by' outlook. Of course, on a battlefield this often devolves to 'kill or be killed', but not necessarily so, and opponents of the Fallschirmtruppen generally found them gracious rather than sullen in defeat and magnanimous in victory. The belief in 'self' (and, as already mentioned, in belonging to a greater 'self') came partly from earlier teaching by parents, school and church, and partly through the Fallschirmjäger selection procedure and rigorous training which cultivated the sense of belonging to an elite.[7]

Camaraderie, always a significant force in any military unit and particularly so at the squad level, was vital to each and every Fallschirmjäger, not just because they helped each other pack their 'chutes but because they knew that after most drops they would be out on a limb, miles and hours or days from relief, and had to rely totally on each other. The sense of chivalry evolved from this, because comradeship was so intrinsic to the Fallschirmjäger ethos that they expected everyone, with the notable exception of partisans, to share it. Partisans are loathed by all regular troops in any war, largely because they melt back into the general populace after inflicting their damage. Hitler himself had also singled them out in his 'Ten Commandments' to the Fallschirmtruppen. 'Against an open foe,' he said, 'fight with chivalry, but extend no quarter to a guerrilla.' This admonition was remembered well on Crete and in Russia in particular, with the slightest suspects being summarily executed.

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[7] *An anomaly here is that all these characteristics could be said to have been shared by the early Waffen-SS formations, whose men certainly shared comradeship amongst themselves but only rarely showed it to 'outsiders'.*

Training

'Angeganen, Sie Affen! Ein impi von Zulus würde Sie abfangen und Sie vor Früstück esse!' (Come on, you apes! A Zulu impi could catch you and eat you for breakfast!) This unattributable quote was apparently uttered by an Obergefreiter leading a cross-country run in Bavaria. The trainee Fallschirmtruppen carried full kit while he wore just a singlet and trousers! The insult was deliberate, since despite their fighting qualities, Zulus had the wrong colour skin as far as the Nazis were concerned, and were classed as *Untermenschen* (sub-humans).

As mentioned earlier, if the new Fallschirmjäger hopefuls found the selection process tough, what followed was, to quote a new recruit of the time,[8] 'unbelievably hard, but basically fair. It passed quickly even if only because we were drilled so hard that we never got a moment to think.'

Most of a new recruit's eight weeks at Stendal[9] were thus spent in strenuous physical exercise morning, noon and night, a toughening-up regime tailored to the Fallschirmjäger light infantry role. Speed was of the essence in virtually everything he and his comrades had to endure but, other than that, to begin with there seemed little difference between this new phase of training and what they had gone through in 'basic'. PE sessions and 'square bashing' occupied much of the day, alongside bayonet practice, unarmed combat sessions and weapons' instruction. Up to this point, most men had only really received tuition in using hand grenades and the Wehrmacht's standard Mauser Gew 98 rifle and Kar 98 carbine, conventional bolt-action weapons with five-round box magazines. Now they had to learn how to use a whole gamut of military hardware. Pistols, sub-machine-guns, machine-guns, mortars and mines were all introduced, and not just those of German manufacture. Recruits also practised using some of the foreign weapons they might encounter on a battlefield; such familiarity could save their lives, especially when dropped behind enemy lines.

Time was also taken up with both lectures on tactics and field exercises, beginning at the Zug or squad level and rising through section and company eventually to that of the whole battalion because, as in all armies, the battalion is the basic fighting unit. There were more obstacle courses to be overcome, but now these included replica fortifications with real barbed wire and dummy minefields. Fortunately, to most men's way of thinking, the political lectures dwindled, with more emphasis being given to bonding and team spirit, welding them together into a tight-knit, but flexible, unit. Despite this, many men began to wonder when they would get down to the real thing.

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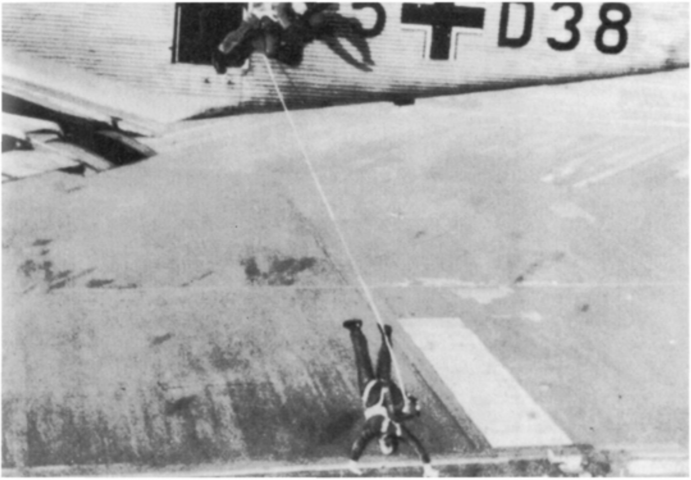
[8] *Martin Pöppel, author of* Heaven and Hell: The War Diary of a German Paratrooper *(Spellmount, 1988).*

[9] *During the war, centralized parachute training was abandoned and relegated to regimental training schools. However, shortages of aircraft and fuel meant that few men in the higher-numbered Fallschirmjäger divisions received any jump training. The CO of 4th Fallschirmjäger Division, Generalmajor Heinrich Trettner, for example, was not entitled to wear the Parachutist's Badge.*

At last, however, the great day did arrive, and the 16-day parachute course began. Even before this, some of the recruits' training had been engineered to ease the transition from 'mudfoot' to 'sky warrior', because part of the physical exercise sessions had included, for example, executing a high jump on to a trampoline or somersaulting in the air over a couple of other recruits crouching on the ground. Such exercises would help the new Fallschirmjäger achieve the sort of 'boneless' fall that was essential for an injury-free landing. Additionally, the men had also received intensive instruction in parachute packing, a painstaking exercise that in most other countries was, and still is, entrusted to specialists, but which the German paras had to learn to do for themselves.

Before packing, the 'chutes were suspended from rails beneath the roofs of aircraft hangars to ensure they were dry and free of tears or wrinkles. Then they were laid lengthways on long trestle tables and carefully folded to a pattern which had, quite literally, evolved through trial and error. It took two men to do this, and each recruit chose his most trusted buddy to help because his life depended upon the quality of his colleague's work.

The moment of truth. The static line has just reached full stretch and the parachute pack of the lower figure, falling in the recommended spread-eagled posture, is just coming open while a second man vaults from the Ju 52's door. (Der Adler)



What followed was equally important because the design of the RZ 1 (Rückenpackung Zwangauslösung or 'rucksack packed to open'), and its successors, the RZ 16 and RZ 20, necessitated a special technique both for jumping from the aircraft (usually a Junkers Ju 52/3m) and for landing. To achieve the necessary level of skill, the trainees used a mock-up door to practise the first and were then suspended from their harness by a wire from the hangar roof rail to perfect the second. It should be noted that, despite these precautions, there were numerous injuries and several fatalities caused through design faults in the RZ 1, which is inexplicable because the standard and reliable 'chute issued to Luftwaffe aircrew not only had lift webs to help control descent, but also featured a more sensible harness with a single central quick-release catch.

All the parachutes issued to the Fallschirmtruppen were opened by means of static lines, not ripcords. This method permits drops from lower heights, resulting both in less time in the air when any paratrooper is particularly vulnerable to ground fire, and in tighter grouping once back on terra firma. The German parachute canopies themselves were 28ft (8.5m) in diameter and sewn from 28 gores (wedge-shaped pieces) of silk. They were packed in cloth bags. A thin cord attached the apex of the folded canopy to the mouth of the bag, and the bag was firmly attached to the 29½ft (9m) static line. This length meant that the 'chute was already fully deployed by the time a man had fallen vertically some 85–120ft (25–30m), permitting drops from less than 320ft (100m). The bagged canopy with its carefully coiled-down shrouds (lines that control the canopy) was stowed in a stout canvas

Fallschirmtruppen rapidly deploy behind an MG34 team during an exercise, leaving their 'chutes billowing in the wind. Out of camera there must be a supply container from which they have retrieved their weapons. (Courtesy of Christopher Ailsby Historical Archives) pack which clipped on to the harness webbing worn by the Fallschirmjäger. The static line was coiled under the flap on the back of the pack. To begin with this was on the right-hand side, but analysis of training mishaps caused it to be moved to the top.

Recruits had to complete six drops before they were entitled to wear the coveted *Fallschirmschützenabzeichen* (Parachutist's Badge). Prior to the recruits' first jump, they have already donned the bulky knee pads designed to prevent injury on landing, and each man has had his parachute harness and pack carefully checked by his instructor, who now serves as the *Absetzer* (despatcher). Once aboard, they clench the end of their static lines between their teeth to leave their hands free in case the aircraft runs into turbulence (or later, in battle, has to take evasive action to avoid enemy anti-aircraft fire or fighters). Once the aircraft has reached its designated height, the despatcher orders the men to stand and hook their static lines to the cable running just above shoulder height along the length of the aircraft's fuselage. The first man in the 'stick' stands apprehensively in the doorway, braced as trained to launch himself cleanly out in the prescribed spread-eagled posture.

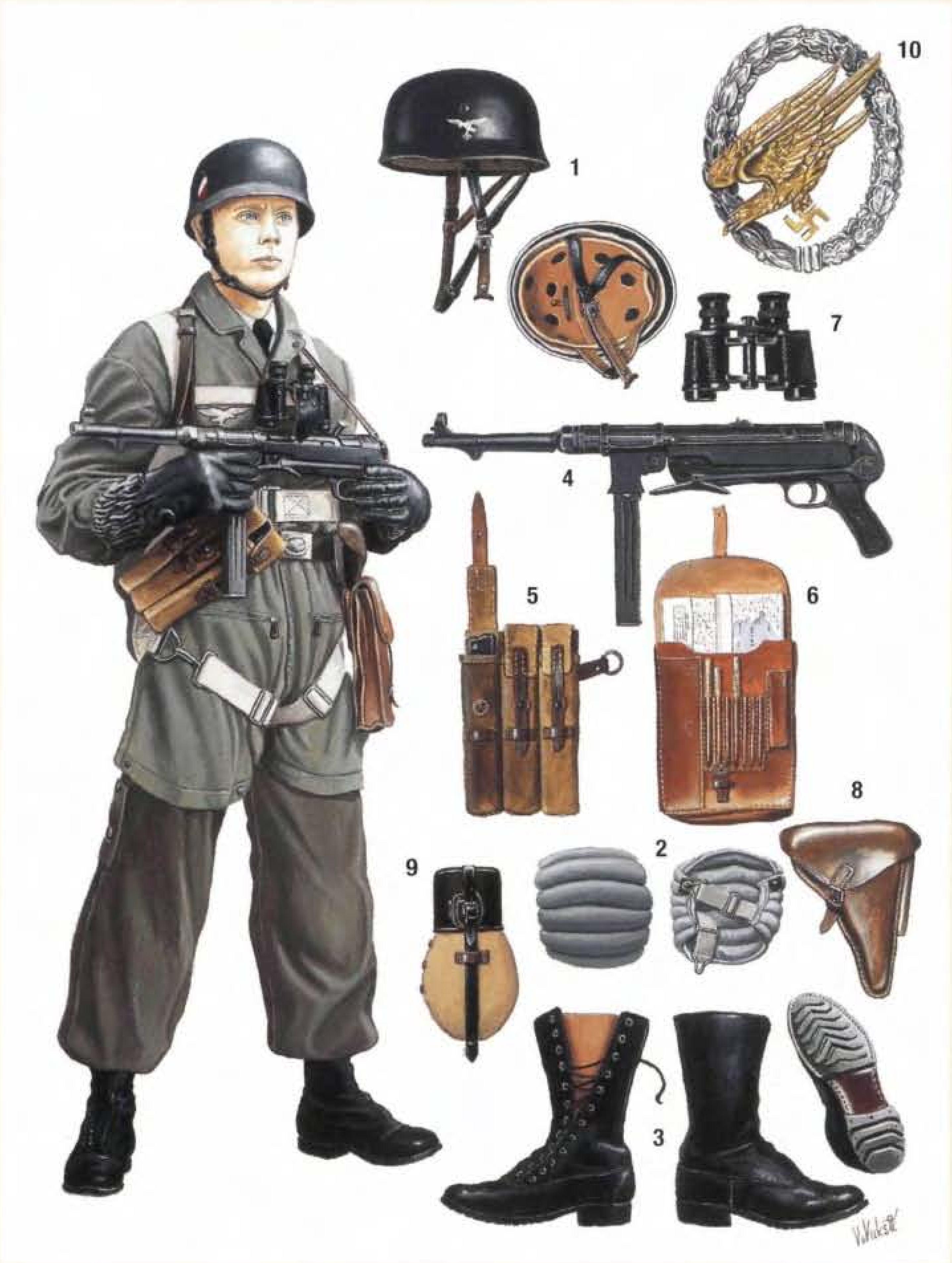
'Gehen Sie! Geh! Geh!' Shuffling forward, the men launch themselves into space, fractionally aware of other static lines trailing in the aircraft's slipstream and other canopies billowing into shape below them. The audible 'crack' and sudden gut-wrenching jerk as each man's own 'chute deploys safely brings immediate, almost unbelieving, relief, and then a huge surge of exhilaration to the paratrooper as he floats deceptively slowly towards the ground. Those still sufficiently aware to remember their training try awkwardly to twist themselves so that they are facing into the wind, to lessen the impact, because suddenly the ground, which moments ago seemed so far away, is now rushing up towards them. Their booted feet then their padded knees hit the ground and they roll, trying already to grab the shroud lines and deflate the 'chute which, in a moderate wind, could drag them across rocks or into water. Fortunately, each man has a special knife with which to cut himself free if necessary. All of a sudden, it is over, and while some men simply brush themselves down others celebrate more enthusiastically.

Five more drops will follow, from different heights with varying wind speeds and including one in poor visibility, although strangely the Germans never seriously practised night drops, which was one of the reasons for the failure of Operation *Stösser* during the Battle of the Bulge. Then comes the award of the silver and gilt qualifying badge, the handshakes from the instructors and the passing out parade through Stendal before each of the newly qualified Fallschirmjäger joins his battalion in 7th Flieger Division.

Appearance and equipment

Fallschirmjäger clothing and equipment were designed to be practical, comfortable and well suited to the battlefield of the 1940s. Unfortunately, the main distinguishing feature of a German para's apparel was his bright golden-yellow *Waffenfarbe* (arm of service colour) applied principally to collar patches and shoulder boards. Men of the 'Hermann Göring' Division(s) wore white. Both colours were wildly impractical on a battleground and were frequently removed or carefully muddied other than when an official photographer (*Kriegsberichter*) was around. Waffenfarbe apart, the Fallschirmjäger wore standard Luftwaffe uniform and insignia with the exception of a few important items.

Starting at the top, the men's jump helmets (*Fallschirmhelme*) were originally cut-down Wehrmacht *Stalhelme* (steel helmets) with the brims removed. This was done partly to prevent the air flow of the initial descent from an aircraft lifting the helmet and half-strangling the men, and partly to eliminate the risk of the relatively sharp edges from possibly severing a shroud line. The helmets were initially painted Luftwaffe blue-grey and featured the national tricolour and air force eagle on either side. Battle experience soon caused them to be repainted green or, in North Africa and Italy, dull yellow, and the insignia disappeared. In winter, they were simply whitewashed, since this would scrub off easily in the spring. A variety of



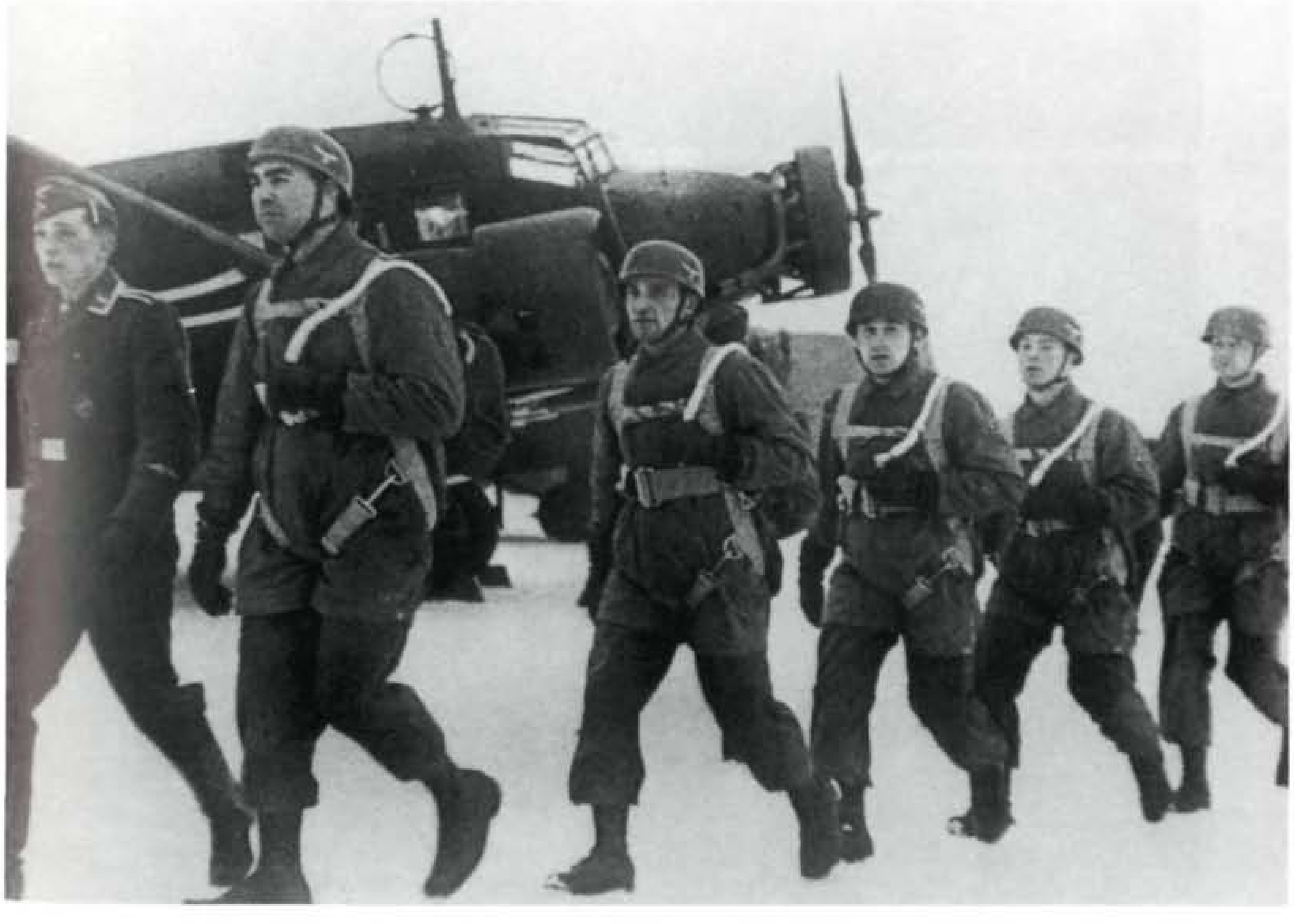
JÄGER, 1940

This Jäger wears parade dress with shirt and tie and the blancoed canvas parachute harness fastened over his jump smock. On his head is the Fallschirmjäger helmet. (**1**) shows the unique liner and straps. He wears a first pattern jump smock and standard combat trousers, but he has not donned the protective external knee pads (**2**). On his hands and feet he wears black leather gauntlets and first pattern side-lacing jump boots (**3**). He carries an Erma 9mm MP40 sub-machine-gun (**4**). Spare ammunition boxes were carried in threes in pouches (**5**) on the waist belt. (**6**) is a leather map case, and the lightweight Zeiss 6x30 binoculars (**7**) further show that he is a squad (Zug) leader. (**8**) is a Luger holster. The water bottle plus drinking cup (**9**) is carried behind the right hip. Worn on the left chest of the Fliegerbluse would be the Luftwaffe Parachutist's Badge (**10**). (Velimir Vuksic © Osprey Publishing Ltd) camouflage cloth helmet covers were issued as the war progressed. Men also made their own disruptive patterns using cut-down string vests or chicken wire, into which they inserted seasonal foliage. After 1941, with the virtual abolition of the Fallschirmtruppen as genuine airborne soldiers, an increasing number of men in the later-numbered divisions simply wore ordinary army helmets.

Other Fallschirmjäger headgear was standard Luftwaffe issue – sidecap (*Fliegermütze*), field cap with brim (*Einheitsmütze*) and both styles of officers' peaked cap (*Schirmütze*), in either blue-grey or tropical tan. For winter, especially in Russia, the men were issued with long woollen toques, tubular garments which fitted over their heads and necks rather like Balaclava helmets. A stylish peaked fur cap with ear flaps modelled on those issued to mountain troops also made an appearance, but it does not seem, from photographic evidence, to have been widely issued to the Fallschirmtruppen. One hat which did single out a Fallschirmjäger officer in the Afro-Mediterranean theatres was the so-called Meyer cap, a comfortable lightweight, loose, air-vented design with a detachable neck flap to protect against sunstroke.

Linen underwear, woollen socks, PE kit, fatigue overalls and white (parade), blue-grey or tropical tan shirts were standard for all ranks and no different from those issued to other Luftwaffe personnel. However, one individual item that became something of a Fallschirmjäger trademark in North Africa and later, was a brightly coloured neckerchief or silk scarf. Some regiments even adopted uniform colours: 5th Fallschirmjäger Regiment's, for example, were dark blue with white polka dots.

Jackets and tunics were, again, standard Luftwaffe, either the stylish tapered-waist Flying Service Blouse (*Fliegerbluse*) or the four-pocket Service Tunic (*Tuchrock*); only the latter appears from photographs to have been issued in tropical tan material.

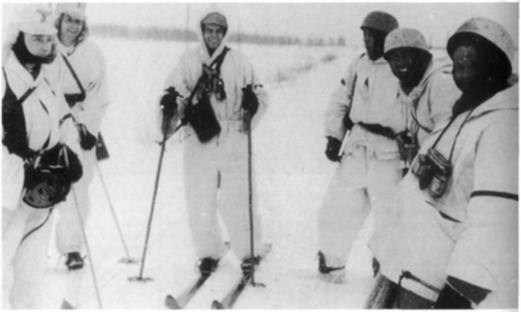


Jägers immaculately kitted out in first pattern jump smocks and boots head towards a Ju 52 for a practice jump from a snow-covered airfield. This is clearly an early photograph, as the men do not wear the external knee pads that were introduced to help prevent injuries on landing. Both the smocks and boots were also changed radically after early battle experience in 1940. (Courtesy of Christopher Ailsby Historical Archives)

Jackets were belted at the waist and all ranks normally wore a holstered sidearm. Over the jacket, the Fallschirmtruppen wore the jump smock (*Fallschirmkittel*), a practical garment made of heavy duck cotton or, later, herringbone weave, which was designed to prevent clothing or equipment getting snagged in the aircraft or entangled in the parachute shroud lines at the moment of opening. The first pattern smock was not, however, easy to put on or take off, because it had short integral legs. The Jäger had to step into the legs, pull the garment up to his shoulders and then struggle into the sleeves before buttoning up the front. On landing, after freeing himself from the parachute harness, the Jäger then had to pull the smock down to his waist in order to undo his equipment belt and buckle it back on outside the smock. To add insult to injury, he had to take the smock off again, or at least pull it down to his knees, in order to relieve himself. The first pattern smocks differed slightly from one another in the number of pockets they had, and were produced in either pale green or grey.

Most men involved in the 1940 campaigns wore the first pattern smock, even though by this time the second had emerged. The later model was of a more practical design that omitted the legs of the first pattern smock, and which buttoned all down the front. On a jump, the lower half buttoned round the upper legs to recreate the earlier legs and prevent the smock billowing up as the Jäger fell. The smock also had two large chest and thigh pockets and was manufactured in a green or tan/brown splinter camouflage pattern. A later variant of this garment, although not designated 'third pattern', was produced in more subtle brownish water camouflage after the Crete operation, and combat trousers were also introduced in this material.

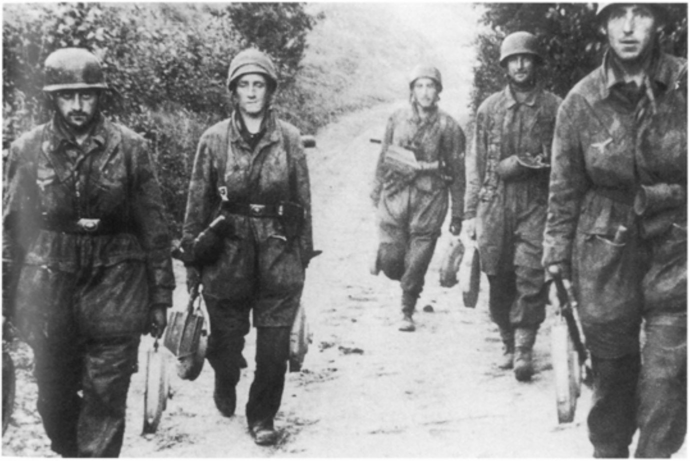
Finally, after 1942, with the virtual abolition of the paratroop mission, an increasing number of Fallschirmtruppen (especially in the higher numbered divisions) were issued with the same single-breasted combat jacket (*Kampfjacke*), made of a rayon/cotton mix in splinter camouflage, as that issued to the Luftwaffe field divisions. Reports of a jump smock being produced in tropical tan are unsubstantiated, although some officers may have had these



A Fallschirmjäger ski patrol in Russia wearing a mixture of Luftwaffe and Gebirgsjäger clothing, including white ski suits. The two men on the left have the very practical Luftwaffe version of the mountain troops' fur-lined ski caps (Bergmütze). (Courtesy of Christopher Ailsby Historical Archives) tailored privately. Other smocks were, however, sewn from Italian camouflage material after the armistice in 1943. The only insignia worn on any smocks or combat jackets (except on parade, when decorations were permitted) were the Luftwaffe breast eagle and cloth rank patches on the sleeves. Other special clothing issued after the first disastrous winter in Russia included at least two patterns of quilted jacket and trousers in reversible white/mouse-grey colours. These garments were designed to give the Fallschirmtruppen more freedom of movement and action in extreme weather conditions than the standard double-breasted greatcoat (*Mantel*), but they were never available in sufficient quantity. It should be noted that the greatcoat was never worn over the jump smock.

For most of the war the Fallschirmtruppen wore combat trousers (*Hosen*) in a slightly darker grey-green material than their smocks. Hosen were relatively loose fitting for comfort and ease of movement, and fastened at the ankles with tapes. They had two side and two hip pockets plus a small fob pocket under the waistband, and could be held up with either braces (suspenders) or a belt, depending upon personal preference. Uniquely, on the outside of each knee there was a vent through which the Jäger could withdraw the rectangular kapok-filled canvas pads which were worn to protect the knees in the heavy frontal fall dictated by the absurd parachute design. The system, however, proved ineffective, so external pads were also later strapped on. Both sets of pads were quickly discarded after landing to give more freedom of movement.

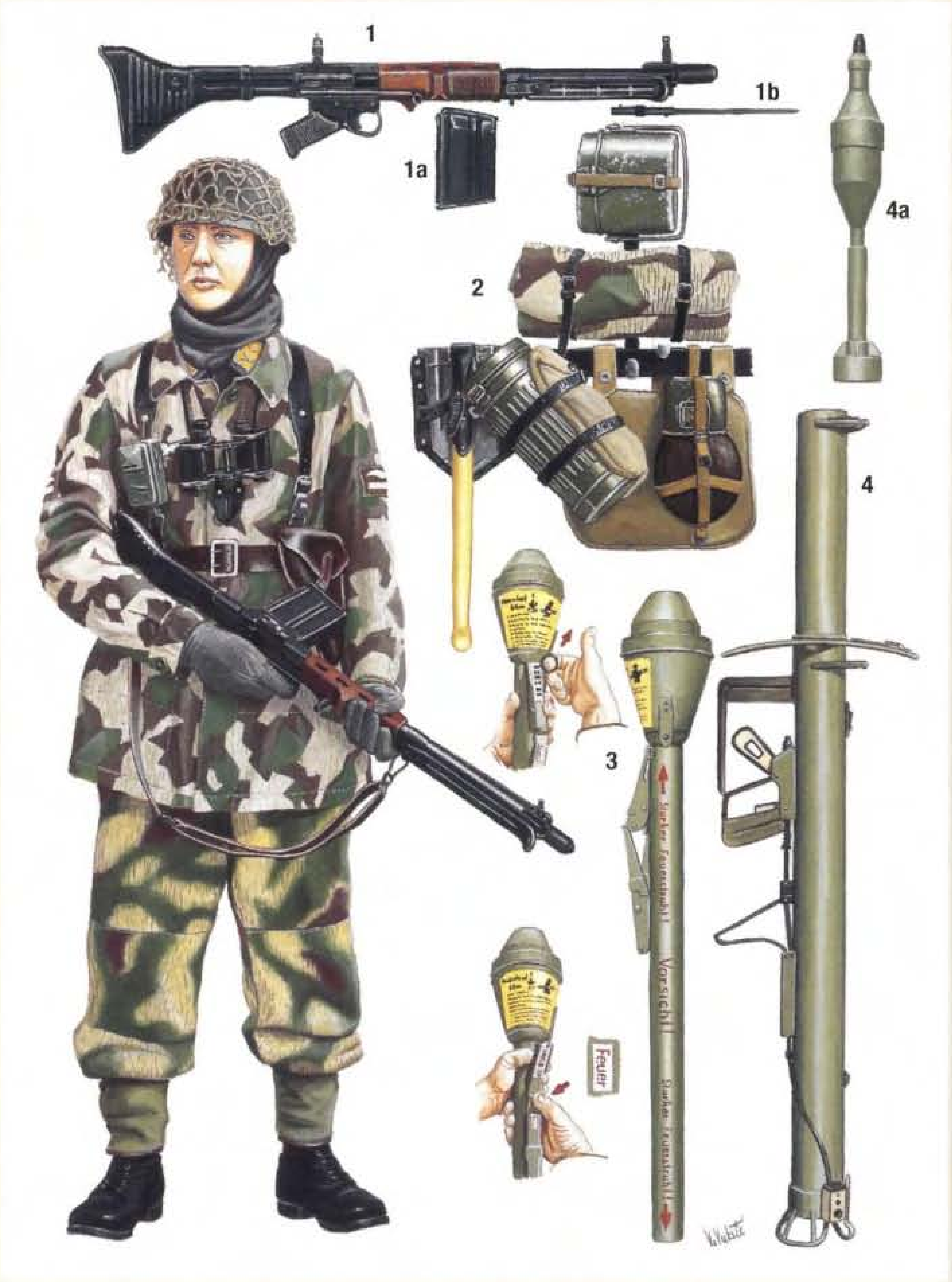
A squad of Fallschirm Pioniere (parachute engineers) bring Teller mines up to the front. The Modell 42 and 43 both contained 11½lb (5.2kg) of Cyclonite/TNT with the ability to penetrate just under an inch (actually 24mm) of armour, blow off tank tracks and wheels and inflict serious injuries to any accompanying infantry. The man in the background has his entrenching spade handily tucked in his belt, while the one in the foreground has stick grenades tucked in the hip pockets of his jump smock. (Courtesy of Christopher Ailsby Historical Archives)



A final distinction of the Fallschirmjäger's trousers was the small pocket fastened with plastic press studs on the right thigh, which carried the so-called 'gravity knife'. Unlike an ordinary clasp knife, which requires two hands to open, the Fallschirmjäger knife had a weighted blade that slid free automatically as it was taken out of the pocket, and was locked in place by a simple thumb catch. It was specially designed to allow a paratrooper, who already had one hand fully occupied trying to gather in his billowing 'chute, to cut the shroud lines and quickly free himself. The knife could, of course, also be used in combat or for eating.

LEUTNANT, ARDENNES, DECEMBER 1944

The figure wears the combat jacket in splinter camouflage material and trousers in brownish water pattern camouflage. He wears the full infantry assault pack (**2**) which carried the mess tin, rolled Zeltbahn, bread bag, entrenching spade with cover, water bottle and gas respirator container, probably containing a washing and shaving kit or other personal items. He is carrying an FG 42 assault rifle (**1**) with a side-mounted 20-round box magazine (**1a**) and spike bayonet (**1b**). (**3**) is the 15cm Panzerfaust 60. Into the front end slotted a 6in (15cm)-diameter bomb whose stem was fitted with flexible fins which unfolded in flight. (**4**) is an 8.8cm RPzB 54, the most effective infantry anti-tank weapon of the whole war. Unlike the Panzerfaust, the RPzB 54 was not a 'throw away' weapon, but could be reloaded with one of the rocket projectiles shown (**4a**). (Velimir Vuksic © Osprey Publishing Ltd)



In North Africa and elsewhere the Fallschirmtruppen were issued with tropical trousers or shorts in a comfortable lightweight but hard-wearing cotton. The trousers were particularly baggy to increase air flow and prevent chafing, and had both two generous hip pockets and a map pocket on the left thigh.

A Fallschirmjäger's uniform was also distinguished by the gauntlets (*Handschuhe*) and jump boots (*Fallschirmschnürschuhe*). The soft black leather gloves, elasticated at wrist and cuff, were designed to keep the Jäger's hands warm both inside the unheated cabin of the Ju 52/3m transport aircraft and during the drop itself. They were also sufficiently supple to be worn in combat. The boots, made of black leather with cleated rubber soles for grip, were originally laced at the side under the mistaken belief that this would offer extra ankle support. The second pattern had standard frontal lacing. Canvas ankle gaiters could be worn with either. However, on parade and as the war dragged on, in the field too, the Fallschirmtruppen wore the standard calf-length Wehrmacht jackboots (*Marchstiefeln*).

Field equipment for the individual Fallschirmjäger was more or less the same as that issued to army and Luftwaffe field divisions, although in the early days the paratrooper was issued with a soft canvas carrying bag for his gas mask instead of the rigid cylindrical metal one, which could have caused injury during a drop. A special ammunition bandolier was also developed for the Fallschirmtruppen. Personal weapons were identical to everyone else's, with the exception of the specially designed Fallschirmgewehr 42 assault rifle (FG42). There was also a higher allocation of other automatic weapons, including the MP40 and MG34/42, and pockets or waistbelts bulged with grenades. The Fallschirmtruppen also had a cut-down lightweight version of the army's standard 8.8cm mortar, the *kurzer* (short) Granatwerfer 42.

Because of the limitations on what a Jäger could carry on his person during a drop, the Germans developed a rigid lightweight container to protect weapons and ammunition on their descent. Rifles and bandoliers, sub-machine-guns and ammunition pouches, machine-guns, mortars and ammunition boxes were all stowed away in these devices. Other containers, clearly marked with red crosses, carried medical and surgical equipment. Because the Fallschirmtruppen needed to get at their weapons very quickly once on the ground, the supply containers were normally thrown out of the aircraft before the first man jumped, giving him an aiming point. However, not all weapons went in the containers and, despite the risks, about one man in four dropped on Crete carried an MP40 tucked under his parachute harness or strapped to his outer thigh. Similarly, during demonstration jumps for the 'brass' at Stendal, carbines were carried very unsafely in the hands. Nevertheless, despite the clumsiness of the German container system, the Fallschirmtruppen never imitated the British practice of stowing weapons and other equipment in a kitbag which could be dangled on a rope below each man, but given the impracticality of the RZ parachutes, this might have posed an unacceptable hazard.

At a higher level, anti-tank weaponry was important, and here magnetic mines and the Panzerfaust ('armoured fist'; a hand-held anti-tank weapon) and RPzB 54 came into their own, replacing the little sPzB 41. Recoilless guns, such as the 7.5cm and 10.5cm IG 40s and 42s (*Infanteriegeschütze* or infantry guns), were also used because they were light in weight and could be dropped by parachute clusters or landed in gliders. Their big drawback in combat was that the backblast from the counter-propellant, which prevented recoil, was both a hazard to friendly troops and a give-away to the enemy, and from photographic evidence most seem to have been used just in training exercises or for the benefit of the Kriegsberichter.

Everyday life

Once recruits were assigned to a battalion, the hectic pace of the past few weeks began to slacken. They may even have been given a few days' leave. For the rest of the time, life in barracks passed uneventfully. Callisthenics and drill continued, of course. Germany was preparing for war, and it was essential that the country's men be kept honed physically and mentally. Both field exercises and lectures now concentrated on small unit tactics, alongside practical exercises in first aid and constant weapons practice so that, in the end, the men could clear blockages or even strip and re-assemble their rifles and sub-machine-guns blindfolded. There were further practice parachute jumps and training flights in the DFS 230 glider. Preparations even extended to irregularly spaced surprise alerts in the middle of the night. There were also, inevitably, household chores to be done – kit and weapons cleaned, for example, and barracks swept, dusted and polished, while each man had to take his turn on the sentry duty roster and unfortunate transgressors endured punishment fatigues.

There was, however, time for leisure, for listening to the radio, playing records, reading books, writing letters or simply indulging in every soldier's favourite pastime of catching up on sleep. Sport was popular too, and the warm summer of 1939 offered plenty of opportunities for going swimming or playing football. In the evenings the men could visit the camp cinema, play cards or chess or, on privileged occasions, take a trip into Stendal itself to have a drink or a meal and socialize away from the canteen for a change.

The invasion of Poland on 1 September followed by the French and British declarations of war altered little for the majority of the Fallschirmtruppen, and like most of the rest of Europe they yawned their way through the months of the 'phony war' while their superiors planned how they were to be deployed in the assaults on Denmark, Norway, Belgium and Holland. The Fallschirmtruppen's part in these campaigns was violent but mercifully

Like most soldiers, the principal subject of a Fallschirmjäger's conversation when not in action was women, and this officer on leave has apparently struck lucky. His rank remains a mystery: although his collar patches have the oakleaf worn by a Hauptmann, Oberleutnant or Leutnant, there are no wings to specify which. (Author's collection) short-lived. Life returned to normal for the best part of a year, although there was a new air of confidence amongst the men and a number now had Iron Crosses or Wound Badges to display. Then came the attacks on Greece and Crete which were a bloodletting and a lesson but, again, the campaigns were so fast and furious that there was no time to think about normal life: there was a job to be done.

The first real experience of sustained campaign life came when 7th Flieger Division was posted to Russia in September. Here, on the Leningrad front, the Fallschirmtruppen found themselves facing a very different foe, a ruthless, remorseless enemy and a no-holds-barred battlefield. Now, the men learned to live in trenches and bunkers with no civilized amenities, no friendly bars, restaurants or cinemas and usually just a blanket over a straw-filled palliasse for a bed. Under these conditions the weather, in everyday life just part of the background, began to consume much of the men's conversation. When it rained, the Luftwaffe, which at this time enjoyed aerial supremacy, was unable to support attacks or help break up Soviet counter-attacks. There was also the impossible task of trying to stay dry or get clothes dried. Later, with the beginning of the autumn freeze, there was both the appalling cold to contend with and the swirling snowstorms that could hide an enemy attack until their bayonets were visible. Body lice were a constant irritation. To top it all there was the incessant shellfire from the Russian batteries that circled Leningrad, although most men, through sheer exhaustion, even learned to sleep through this noise. Food, most of the time, was not a hardship this early in the war, because the mobile field kitchens were still able to supply at least one hot meal a day even if it was not *haute cuisine*.

In December 1939 the bulk of 7th Flieger Division was relieved in the line and the survivors, shaken but not yet demoralized by their first taste of total war, found themselves back in Stendal. For some, however, it was a short-lived respite because they discovered

Fresh milk today for a section of Jägers billeted on a Normandy farm in 1944. Even after D-Day, daily life had to continue. (Courtesy of Christopher Ailsby Historical Archives)

Opposite
Probably in search of a bar, an off-duty squad in a French town exchange banter with a pair of comrades standing on sentry duty. (Author's collection)

themselves drafted into a new brigade intended to spearhead an airborne assault on Malta. When this was called off, the men were enplaned for North Africa to join Rommel. Here, 'everyday life' assumed another new meaning. The adversaries now were the heat by day and the unexpected chill at night, the constant sand, dust and grit which invaded every pore of the skin and made keeping weapons clean an even more essential chore, and the flies, the nauseating swarms of flies everywhere. Food, or the lack of it, also became a real preoccupation, as unlike in other theatres of war, it was not possible to forage in the desert to supplement the normal ration issue, although the occasional scrawny goat did make its way into the stewpot. The tinned Italian sausages, which were provided along with each man's daily loaf of bread (freshly cooked in mobile field bakeries), pot of margarine and mug of *ersatz* (replacement) coffee, tasted disgusting and were virtually indigestible. Fresh fruit and vegetables were scarce and diarrhoea, dysentery and scurvy soon struck, while the medics kept a watchful eye for any sign of the dreaded typhus. The only consolation in this roll-call of misery was the occasional bottle of Italian wine.

Those Fallschirmtruppen who survived their African safari and later found themselves in Italy believed, initially, that they had drawn a 'cushy billet'. The food was now wholesome and plentiful, there was plenty of wine and, away from the front line, there was the splendid scenery, the beautiful *signorinas* and the magnificent city sights to enjoy. But in Italy there was also the growing awareness that the Third Reich was now on the defensive even though the subject was rarely discussed, except with the most trusted friends. However, it became clear to the troops that the end was in sight, despite Hitler's promises of 'wonder weapons', when they were ordered to abandon the Gustav Line and Rome fell. Two days later came the news of the Allied landings in Normandy, but there would be many more miles to trudge and battles to fight before they could rest.

Experience of battle

'I heard a noise. I turned to the right and there I saw a black soldier in front of me. If I remember correctly, he laughed, but in a situation like this you remember your training – he who shoots first lives longer.'

Feldwebel Willi Renner was a member of 6th Fallschirmjäger Regiment – Friedrich Freiherr von der Heydte's old command – dug in near Obermarch on the Belgian–German border on Christmas Day 1944, at the height of the Ardennes offensive. Unknown to the sergeant, his former CO, having valiantly tried to secure his objective during Operation *Stösser*, had been captured with a broken arm three days earlier. Renner continues:

> I had a machine-pistol and I was about to shoot, but because of the cold and the poor conditions of the last few days, I was only able to get one shot off. Anyway, he disappeared back in the hedge.
>
> I was checking my company's emplacements and eventually I got back to the last position, which was a machine-gun post with its guns pointed at the valley where the Americans were on the other side. I was a bit puzzled, everything was so quiet, then suddenly someone shouted at me, 'Hey, What the hell are you doing? You'll be blasted out of sight!' Shots rang out and I dived for cover, but my legs were sticking out. I felt a sudden 'thump'. It's a really strange feeling – a dull thud as if someone has just hit you with a heavy club. I scrambled in panic into the

HÔTEL
GARAGE
SELLERIE

> machine-gun hole and my mates tore up some pieces of bed sheets. They wrapped them round my legs as an emergency dressing. I lay there for an hour, but after a while the pain was too much. I decided to make a 'run' for it. Eventually I managed to scramble out on my stomach. A few seconds passed then I heard one of the Americans, who obviously spoke German, shout 'komm rüber' [Come over]. I could have given myself up, but there's always the possibility that you are accused of deserting to the other side. I thought there was no way I could let that happen. I threw myself aside, crawled on my elbows for a while, then flung myself into the bush. There was a lot of firing but I managed to get back to my comrades. One of them hauled me across a turnip field and did his knee in, but we carried on and finally reached the company command post where there was a doctor.

War, of course, is never glamorous. It's nasty, brutal, dirty and filled with pain, unendurable noise, confusion, dust, smoke, debris and blood. Von der Heydte, whose 6th Fallschirmjäger Regiment was the only Fallschirmjäger unit in the front line on D-Day back in June 1944, certainly encountered confusion behind Utah beach:

The first taste of real action for the Fallschirmjäger in their true role came in Denmark and Norway in April 1940 and was only a partial success due to weather and unexpected resistance. It should, however, have warned the rest of Europe to expect more of the same. (Der Adler)

> On the first day I received no orders. I was my own boss. The only contact was through the French phone network. [We] were forbidden to use this because of the French Resistance sabotaging the lines. I came across an old church tower in St Côme du Mont, got hold of the key, and went up there to take a look out over the coast. The forces we had were not in a position to offer a vigorous resistance. At every mile along the coast was a bunker and, of the three I could see, only one was firing at the Americans. I felt my Fallschirmtruppen were very vulnerable. I made a detour back to my command post and came across a German artillery battery which had been totally deserted. This was the second line of defence! When I finally contacted Marcks [Generalleutnant Erich Marcks, CO of LXXXIV Korps] I told him I had to try to defend the line north of St Côme du Mont. But then I had to leave because someone, I don't know who, had given the order to the engineers to blow up all the bridges [over the River Douve]. All the forces north of Carentan had been given the order to withdraw, because 'we' were afraid 'we' would be surrounded. I said it's nonsense [but] we had to do it. The water was up to our chests and we had all our heavy guns with us. Two of my soldiers drowned.

Earlier in the war, things had at times been slightly easier for the Fallschirmtruppen. The then Oberleutnant (1st Lieutenant) Rudolf Witzig, who led Sturmgruppe 'Granit' in the assault on Eben Emael once he secured a second tow for his glider, said:

> Our final task was to blow in the fortified entrances and press the attack into the depths of the fortress, holding all captured positions until relief arrived. During some hours of moderate fighting, we managed to reconnoitre the entrances and we penetrated the installations already captured, but then the Belgian artillery started to shell our positions and their infantry attacked us repeatedly over the north-western slope, which was covered with dense undergrowth. Later we learned from Belgian sources that this was no counter-attack, but merely reconnoitring advances. That night was uneventful. After the hard fighting during the day, the detachment lay, exhausted and parched, under scattered fire. Every burst might have signalled the beginning of the counter-attack we feared, and our nerves were tense. About 07:00 hours [on 11 May] the advance section of 51 Pionier Bataillon at last arrived at the fortification. We retired after burying our dead and handing over our prisoners.

Both the capture of Eben Emael and that of Crete a year later were milestones in the justified creation of the Fallschirmjäger legend, but every victory in war comes at a price. Oberfeldwebel (Sergeant-Major or Flight Sergeant) Walter Wachter was the pilot of a DFS 230 during the invasion of Crete. He recalled:

> A huge red cloud of dust hung over the airfield. Within 15 minutes my Kette [flight of three aircraft] was all set to go with a crew of eight Fallschirmtruppen each. The Ju 52s rolled forward. The overloaded glider rumbled along clumsily behind the towing aircraft and wouldn't leave the ground. Slowly we were pulled into the air.
>
> Everyone was lost in his own thoughts. The open sea lay before us. We had now reached our unhooking height. It was a peaceful flight in the first light of dawn. Suddenly the towing aircraft to the right of us drew ahead, trailing a rope but no glider. We now had 20 men – too few. We could see a lot of mushroom-shaped smoke clouds – the bombers were at work, preparing the ground. At intervals I could make out the lie of the land. A few bushes and trees were blocking

> the landing area. We were soon close to the landing point but too high. We had to move very swiftly – we couldn't present a target for the Flak. Everything was happening so fast now. Smash! Into a bush. The left wing struck a tree and broke off. The glider rocked and stayed still. The crew were unscathed – we all climbed out.

Wachter was lucky, though later in the day he was wounded by small-arms fire. Perhaps an even more harrowing experience befell 19-year-old Jäger (Private) Karl Eisenfeller from Nr. 2 Kompanie of 3rd Fallschirmjäger Regiment who, like many of his comrades, had been parachuted into a landing a considerable distance from the designated point. His first problem was how to rejoin his unit so, abandoning even his helmet in the ferocious heat but not the pistol which was his only weapon, he approached a cluster of houses. His next sight was two dead Jägers, then a Cretan woman doing her washing, who screamed loudly. Bypassing her house, he entered the village, where a number of young men were lounging around. Trying to conceal his fear, Eisenfeller approached them and begged for a drink of water before trudging on, spine crawling in expectation of a bullet in his back. 'Fortunately,' he said after finally rejoining his unit despite running a more serious gauntlet of fire from a British patrol, 'they only shot when I was quite a way down the road, and they missed!'

The last word on Crete goes to Hauptmann Gerhard Schirmer from II/FJR 2 who jumped at Heraklion: 'It was a hard fight, but we knew whenever you fought against the English, it was a fair fight. We were able to send over envoys and agree on a ceasefire, say, of an hour, so that both sides could retrieve their wounded.' Like Wachter, Eisenfeller and Schirmer also survived the war – as did Oberjäger Robert Frettlohr who settled in Yorkshire, England, at the end of hostilities. He was captured by Polish troops in the ruins of Monte Cassino monastery. At the time he was serving with the engineer company of 4th Fallschirmjäger Regiment.

The sternest test for the Fallschirmtruppen was on Crete. Faulty intelligence conspired with the rugged terrain, strong Allied resistance in several places, lack of naval support, the activities of Cretan partisans and a variety of other factors to create insupportable casualties and write finis to any further large-scale paratroop operations. (Author's collection)

> On April 1 I was posted to Rocco Janula [Castle Hill] and I was up there until the order came to retreat. They were shelling us all the time as we went up. As a young man of 20 years old, it was impossible to know what you felt. They kept telling you that you had to fight for your country. Forget it. You fight for self-survival. If anyone gets killed, you say, 'It's not me.' Anyone who says they weren't scared is lying – you were scared, all the time.
>
> After we'd rested, we waited to time the shells – one, two – then two of us would take off – always by twos. Then it was my turn. There was a flash close by and – I don't know. I passed out. When I woke up I crawled up to the monastery and got to the first aid post, which was where St Benedict was buried. The doctor put a bandage round my leg and said, 'That's it, you're not going back.' If there had been a road and I'd had a stick, I would have tried to get back, but there was no road, only rock.

Left behind with other wounded who could not walk, he was treated kindly by his captors, who sent him to an aid station and thence into captivity.

The Eastern Front was a different world. The following valediction from Leutnant Friedrich Buschele, attached to Kampfgruppe 'Sturm', is a fitting ending to this chapter. He was killed by Russian partisans in the winter of 1942, but his diary survived:

> Everywhere the forests and marshes are haunted by the ghosts of the avengers. They would attack us unexpectedly, as if rising from under the earth. They cut us up to disappear like devils into the nether regions. The avengers pursue us everywhere. You are never safe from them. Damnation! I never experienced anything like it anywhere during the war. I cannot fight the spectres of the forest. While I am making this entry, I look with anxiety at the setting sun. It is best not to think about it.

After Russia, many men welcomed being posted to Sicily and Italy, but the battles themselves were equally hard-fought, and this PaK 38 crew appear to have their hands full. (Courtesy of Christopher Ailsby Historical Archives)

CRETE 1941

Peter D. Antill

Background

The German invasion of Crete in May 1941 stands as a landmark in the history of airborne warfare. Until that point, airborne operations had been used mainly in a tactical and operational context to seize key objectives in advance of the ground forces, such as the seizure on 26 April 1941 during the Balkan campaign of the bridge over the Corinth Canal, and the seizure of the Belgium fortress of Eban Emael on 11 May 1940. The German invasion of Crete, codenamed Operation *Merkur*, or *Mercury*, after the Roman god of communication, travel and theft – the counterpart of Hermes, the messenger of the gods in Greek mythology – remains the only operation in history in which a major strategic objective was assaulted and secured exclusively by airborne troops. The operation was the brainchild of Generalmajor Kurt Student, the commander and dedicated champion of the Fallschirmjäger, who firmly believed that the paratroopers were capable of operating in their own right and not merely as a tool to support the Wehrmacht.

The immediate background to Operation *Mercury* lies in the events in Europe, and particularly the Balkans, during 1940 and 1941. With the postponement of Operation *Seelöwe* (*Sealion*), the planned invasion of Britain, Hitler decided to opt for a peripheral strategy as recommended by others in the Nazi hierarchy such as Reichsmarschall Hermann Göring and Grossadmiral Erich Raeder. The aim was to bring Britain to the negotiating table before American assistance could prove effective, or the Soviet Union decided to enter the war on the Allied side. Even the army considered a Mediterranean strategy with the Chief of Staff, General Franz Halder, discussing options with General Walter von Brauchitsch, in case *Seelöwe* proved impossible. In October 1940, Hitler attempted to cement a Mediterranean coalition by travelling on his personal train to visit General Franco, Spain's Nationalist dictator, at Hendaye and Marshal Pétain, President of Vichy France – the only time Hitler left his headquarters for anybody other than Il Duce, a sign that he attached a great deal of importance to the plan. Neither meeting was entirely successful – Hitler's meeting with Franco drawing a comment from Hitler that he would rather have several teeth removed – as both leaders were wary of losing colonial territory

Opposite
A group of German Gebirgsjäger advance in column. It is unlikely that they expect to make contact with Allied forces in the near future given their general disposition, and so it is possible that they are on the flank of the German advance, probably from 85th Gebirgsjäger Regiment. Photograph from the book Gebirgsjäger auf Kreta. *(Alexander Turnbull Library, DA-12651-F)*

in order to persuade the other to join the Axis cause. These diplomatic efforts were designed to allow the Wehrmacht to conduct an assault on Gibraltar (Operation *Felix*), then deploy reinforcements to aid the Italian forces in Libya (an offer made personally to Mussolini) enabling Axis forces to drive for the Suez Canal.

Hitler had in fact vetoed earlier Italian designs on Yugoslavia as it was tied economically to the Reich, and he wanted to keep the Balkans relatively stable. He had intervened in a dispute between Hungary and Romania over the region of Transylvania, as Germany depended upon Romanian oil exports, and while he had allowed the transfer of some territory to Hungary (Hitler also settled the Bulgarian claim for Southern Dobrudja), he had guaranteed the remainder of Romania and sent a large military 'training mission' to the country. This upset the Soviets who had seen that part of the Balkans as traditionally in their sphere of influence, indeed they had annexed part of Romania – Bessarabia and Bukovina – during the Battle for France. Despite German diplomatic assurances, the Soviets accused them of breaching Article III of the Non-Aggression Pact that called for joint consultation.

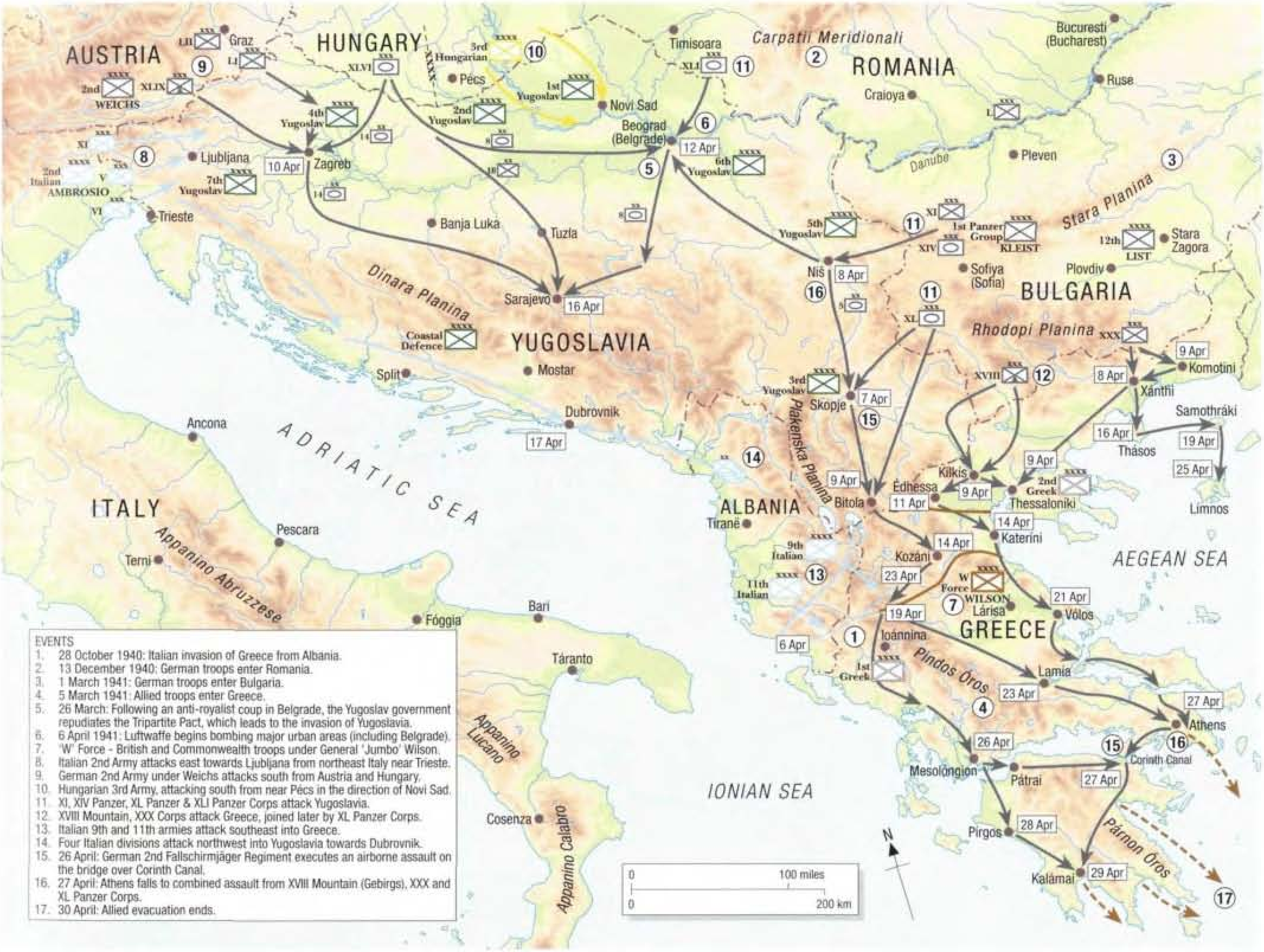
Having established some form of stability in the Balkans, the Führer strongly recommended to the Italians that the status quo be maintained for the time being. Hitler was anxious that war with the Soviet Union be initiated under circumstances of his own choosing, not as a result of some crisis in the Balkans. This immensely annoyed Mussolini who was afraid that the war might end before the Italian armed forces could demonstrate their military prowess to the world. Greece seemed to be the exception to the Balkan rule, as it was technically part of the Mediterranean theatre and could serve as a strategic outpost to support the Italian drive against Egypt and the Suez Canal. Indeed, Hitler had tried to interest Mussolini in both Greece and Crete as early as July 1940. Both OKH (the Army High Command) and OKW (the High Command of the Armed Forces) had considered plans for

British, Australian and New Zealand troops from a variety of units disembark at Souda Bay after their evacuation from Greece after the Balkan campaign in late April 1941. (Alexander Turnbull Library, DA-01611-F)

a joint Italian–German offensive in the Mediterranean and concluded that an attack on Greece would be an essential part of any campaign. Such an attack would take place after the Italian capture of Mersa Matruh, giving the Axis airfields in North Africa from which to provide air support for a drive on Suez and an airborne invasion of Crete. Although the Greek leader, General Metaxas, maintained a neutral position, Greece was bound strategically and economically to Britain, and the Greek royal family had strong British connections. Occupying mainland Greece and Crete would pre-empt a British move into Greece that would directly threaten Italy, provide an additional base for operations against the Italian advance in North Africa and threaten the Romanian oil fields. Therefore an Italian attack on Greece suited Hitler's overall plans, and he may have even given Mussolini a green light when the two met at the Brenner Pass on 4 October.

The Italian intelligence assessment of the Greek armed forces was unflattering at best, and therefore an easy victory was confidently predicted. British intervention would be forestalled by Marshal Graziani simultaneously launching the second stage of his North African offensive against Mersa Matruh. Mussolini launched his attack on 28 October after issuing an ultimatum to the Greeks. Unfortunately he had ignored warnings that the Italian

Balkans campaign, 6–30 April 1941.


AUSTRIA
HUNGARY
ROMANIA
YUGOSLAVIA
BULGARIA
ALBANIA
GREECE
ITALY
ADRIATIC SEA
IONIAN SEA
AEGEAN SEA
Graz
Pécs
Timisoara
Carpatii Meridionali
Bucuresti (Bucharest)
Ruse
Craioya
Novi Sad
Beograd (Belgrade)
Zagreb
Ljubljana
Trieste
Banja Luka
Tuzla
Sarajevo
Danube
Pleven
Stara Planina
Stara Zagora
Plovdiv
Sofiya (Sofia)
Niš
Dinara Planina
Split
Mostar
Dubrovnik
Skopje
Plakenska Planina
Rhodopi Planina
Komotini
Xánthi
Samothráki
Thásos
Limnos
Kilkis
Édhessa
Thessaloniki
Bitola
Tiranë
Kozáni
Katerini
Lárisa
Vólos
Ioánnina
Pindos Óros
Lamía
Athens
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Pátrai
Pirgos
Kalámai
Párnon Óros
Ancona
Pescara
Terni
Appanino Abruzzese
Fóggia
Bari
Táranto
Appanino Lucano
Cosenza
Appanino Calabro
2nd WEICHS
XLIX
LI
LII
XLVI
3rd Hungarian
1st Yugoslav
2nd Yugoslav
4th Yugoslav
7th Yugoslav
2nd Italian AMBROSIO
XI
V
VI
XLI
6th Yugoslav
5th Yugoslav
1st Panzer Group KLEIST
XIV
XL
12th LIST
XXX
XVIII
3rd Yugoslav
Coastal Defence
9th Italian
11th Italian
1st Greek
2nd Greek
W Force WILSON
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EVENTS
1. 28 October 1940: Italian invasion of Greece from Albania.
2. 13 December 1940: German troops enter Romania.
3. 1 March 1941: German troops enter Bulgaria.
4. 5 March 1941: Allied troops enter Greece.
5. 26 March: Following an anti-royalist coup in Belgrade, the Yugoslav government repudiates the Tripartite Pact, which leads to the invasion of Yugoslavia.
6. 6 April 1941: Luftwaffe begins bombing major urban areas (including Belgrade).
7. 'W' Force - British and Commonwealth troops under General 'Jumbo' Wilson.
8. Italian 2nd Army attacks east towards Ljubljana from northeast Italy near Trieste.
9. German 2nd Army under Weichs attacks south from Austria and Hungary.
10. Hungarian 3rd Army, attacking south from near Pécs in the direction of Novi Sad.
11. XI, XIV Panzer, XL Panzer & XLI Panzer Corps attack Yugoslavia.
12. XVIII Mountain, XXX Corps attack Greece, joined later by XL Panzer Corps.
13. Italian 9th and 11th armies attack southeast into Greece.
14. Four Italian divisions attack northwest into Yugoslavia towards Dubrovnik.
15. 26 April: German 2nd Fallschirmjäger Regiment executes an airborne assault on the bridge over Corinth Canal.
16. 27 April: Athens falls to combined assault from XVIII Mountain (Gebirgs), XXX and XL Panzer Corps.
17. 30 April: Allied evacuation ends.

forces in Albania were completely unprepared to conduct an autumn campaign and had not even been assigned engineers. The lack of a clear and sensible strategy – such as driving directly on the vital port of Salonika instead of pushing across the mountain range of the Epirus – exasperated Hitler almost as much as the campaign's utterly inefficient and uncoordinated execution. He later stated that he had counselled against undertaking the expedition at that point. The Italian campaign in Greece quickly ground to a complete halt and the Greeks then launched a counter-offensive that drove the Italians out of their country and threatened Albania itself. The Italian position in the eastern Mediterranean then started to completely unravel. First the British damaged half of the Italian battle fleet in a daring raid on the port of Taranto on 11 November, then they intervened in Greece by sending RAF squadrons there and a battalion of infantry to Crete to secure Souda Bay. The latter move allowed the Greeks to transfer the Cretan V Division to the mainland. In a final blow the British took the initiative in the desert war after Marshal Graziani had stopped at Sidi Barrani to re-organize his supply lines. The British attack completely defeated the Italian force of ten divisions in Libya and threatened the entire Italian position in North Africa.

At the same time as the Italians were facing crisis in the eastern Mediterranean, events elsewhere were to change the context of the situation entirely. The Germans faced continued Soviet intransigence and suspicions over their plans for Europe. Since late July 1940, Hitler had been toying with the idea of exactly when to attack the Soviet Union but had decided to defer the decision to try to secure the Balkan and Mediterranean theatres and, in the process, weaken Britain's position, potentially forcing her to the negotiating table. Hitler therefore considered delaying the attack on the Soviet Union until 1942. Events towards the end of 1940 were to cause an irrevocable eastward shift of the emphasis in the German war effort and bring forward the timetable for the attack on the Soviet Union by a year. In November, the Soviet Foreign Minister, Molotov, visited Berlin for negotiations with Hitler and von Ribbentrop to pave the way for Soviet membership of the Axis. Despite the Germans dangling the tempting carrot of a share in the British Empire, Molotov would not be deflected from Soviet demands to control Finland and Bulgaria, as well as the exits from the Baltic Sea. Hitler was staggered by the scale of Stalin's demands and decided that the issue of when to attack the Soviet Union had been settled. The Soviet Union had to be destroyed in 1941 before the United States could enter the war decisively. With this decision, the nature of the peripheral strategy changed fundamentally. No longer was it part of the war against Britain, but rather part of the preparations for war against the Soviet Union. The southern flank had to be secured so that the British could not intervene effectively and threaten the Axis position in the Balkans.

In light of these events, and as a result of the new emphasis on an attack on the Soviet Union, the original staff plans for the Mediterranean were revised. Operation *Felix* was put on hold, possibly until late 1942, due to Franco's bland lack of commitment to the Axis cause. However, the invasion of Greece had become more important than ever because of the need to secure the right flank of the advance into the Soviet Union. It would also act as a cover for the deployment of troops eastwards in preparation for Operation *Barbarossa*. In this light, the invasion of Greece can be seen as a limited operation, as was the sending of an expeditionary force, the Afrika Korps under Generalleutnant Erwin Rommel, to North Africa to bolster the Italian defence and contain the British advance. No one, least of all Hitler, anticipated that Rommel would develop much more ambitious ideas.

Göring and Raeder were both unhappy at the new emphasis on a move eastwards. Both men had wanted to see Britain knocked out of the war before Germany turned its attention east, in order to prevent the dreaded two-front war. Also, in Göring's eyes, the Luftwaffe would probably play a subservient role to the army in *Barbarossa*, but in the Mediterranean, the Luftwaffe would still have freedom of action, and so planning continued for operations against Gibraltar, Malta and Crete – all potential targets of the airborne forces. Fliegerkorps X was transferred from Norway as they specialized in anti-shipping operations and scored their first success by crippling the aircraft carrier HMS *Illustrious* on 10 January.

On 6 April 1941, while preparations were still underway for Operation *Barbarossa*, the Germans invaded both Greece (Operation *Marita*) and Yugoslavia (Operation *Strafe*), where a coup by a group of military officers had toppled the regime that had acceded to German demands and joined the Tripartite Pact. General Archibald Wavell had already despatched an expeditionary force, called 'W' Force after its commander Lieutenant General Henry 'Jumbo' Wilson. It consisted of the British 1st Armoured Brigade (Brigadier Harold Charrington) and the I Anzac Corps (Lieutenant General Sir Thomas Blamey), with the New Zealand Division (Major General Bernard Freyberg) and 6th Australian Division (Major General Sir Iven Mackay). In a few short weeks German intervention completely reversed the Axis fortunes in the area and forced the Allies to evacuate their forces after overrunning both Yugoslavia and Greece, while Rommel had launched an unexpectedly early offensive out of Tripolitania, advanced rapidly through Cyrenaica (capturing Major General Richard O'Connor in the process), laid siege to Tobruk and threatened to press on to the Suez Canal.

In a taste of things to come, two battalions of paratroopers under Oberst Alfred Sturm were used to capture a road bridge over the Corinth Canal, a waterway that ran through a deep gorge dividing the Peloponnese from the Greek mainland, and one of the main escape

German Gebirgsjäger from Julius Ringel's 5th Gebirgs Division (as given away by the standard German infantry equipment, including the helmet) preparing to board their transports for the journey to Crete, during the early stages of the operation in May 1941. (Alexander Turnbull Library, DA-01313-F)

routes for Allied forces retreating south. The bridge was guarded by a 'close bridge garrison' of British troops and had been set for demolition by the Royal Engineers. The Germans hesitated over launching the operation but once decided, executed it with characteristic speed and flexibility. The British force was adequate for the task of defending the bridge, with a reinforced battalion concentrated on the south side of the bridge supported by AA guns and a few light tanks. As mentioned in the Introduction, there are typically two alternatives in an airborne operation. One is to land the troops some distance from the objectives, avoiding the strongest part of the defences and minimizing disruption during the landing itself. This method also allows the paratroopers to form up and assault the

CHRONOLOGY

1940

28 October	Italian forces invade Greece.
23 November	Romania joins the Tripartite Pact.
13 December	Adolf Hitler issues War Directive No. 20 outlining the planned invasion of Greece, Operation *Marita*. German troops enter Romania.
18 December	War Directive No. 21 is issued, concerning the planned attack on the Soviet Union, Operation *Barbarossa*.

1941

1 March	Bulgaria joins the Tripartite Pact and German troops prepare to enter the country.
5 March	British Expeditionary Force prepares to enter Greece.
25 March	Yugoslavia signs the Tripartite Pact.
26 March	Anti-royalist coup in Yugoslavia leads to the repudiation of the Tripartite Pact.
27 March	War Directive No. 25 is issued outlining Operation *Strafe*, the invasion of Yugoslavia.
6 April	Germans launch simultaneous invasions of Yugoslavia and Greece, and the Luftwaffe begins air bombardment of urban targets, including Belgrade.
7 April	Operation *Barbarossa* postponed until 22 June. The Metaxas Line broken by German mountain troops.
10 April	Axis forces capture Zagreb.
12 April	Belgrade falls to German troops.
14 April	XVIII Gebirgs Corps penetrates the Mount Olympus defence line and takes Katerini.
15 April	Generalmajor Student submits his plan for the invasion of Crete to Reichsmarschall Göring.
16 April	Sarajevo falls to XLVI Panzer Corps.
17 April	Churchill gives General Sir Archibald Wavell permission to withdraw 'W' Force from Greece.
18 April	German armistice with Yugoslavia comes into effect.
25 April	War Directive No. 28 covering the proposed invasion of Crete, Operation *Merkur*, is issued.
26 April	German 2nd Fallschirmjäger Regiment assaults bridge over Corinth Canal and captures the town.
27 April	Athens falls to German forces.
29 April	Kalámai falls, German forces reach the southern coast of Greece.
30 April	Allied evacuation ends. Some 25,000 Allied troops have been evacuated to Crete and so Wavell appoints Major General Bernard Freyberg to command the garrison.
1 May	The Luftwaffe starts its bombardment of Crete.
16 May	2nd Battalion, the Leicestershire Regiment arrives on board the cruisers of Force 'B' while heavy air attacks occur on Heraklion, Maleme, Souda Bay and Hania.
18 May	Air raids continue on Heraklion and Maleme, while HMS *Glengyle* lands the 1st Battalion, Argyll and Sutherland Highlanders (A&SH) at Tymbaki.

OPERATION *MERKUR*

20 May	Heavy bombing of Heraklion and Maleme precedes the landing of parachute and glider troops around Maleme (08.00hrs), in Prison Valley (08.15hrs), to the east of Rethymnon (16.15hrs) and around Heraklion (17.30hrs). By nightfall, none of the four main

	objectives has been taken and the paratroopers have only established a firm perimeter at Maleme.
21 May	With pressure building, the New Zealand 22nd Infantry Battalion withdraws, relinquishing Hill 107 to the Germans and thus the airfield. At dawn, the Ju 52 carrying Hauptmann Kleye lands on the western edge of the airfield, confirming the area is free from direct artillery fire. Reinforcements are dropped near Heraklion, Pyrgos and to the west of Maleme airfield, and 100th Gebirgsjäger Regiment starts to arrive (17.00hrs). The Allies start to organize a counter-attack, while the Royal Navy intercepts a convoy of Greek vessels carrying elements of 5th Gebirgs Division.
22 May	The Allied counter-attack manages to reach the eastern edge of Maleme airfield by around 07.30hrs but is forced to withdraw. The Allied position deteriorates and the troops are forced to withdraw to a shorter line, leaving Maleme in German hands. In Prison Valley, around Heraklion and Rethymnon, the paratroopers are too weak to break through the defences. 3rd Fallschirmjäger Regiment in Prison Valley sends out a detachment under Major Heilmann in the hope of linking up with forces moving east from Maleme.
23 May	The Germans continue to fly in reinforcements, while Allied forces withdraw to a new line near Galatos, as they are in danger of being outflanked.
24 May	Reinforcements are dropped south-west of Heraklion. 85th and 100th Gebirgsjäger Regiments start to probe the Allied front line around Galatos.
25 May	1st Battalion, A&SH starts arriving at Heraklion only to find their progress blocked. Later that day, the western group of German paratroopers under Major Schultz marches east to join up with the remainder of 1st Fallschirmjäger Regiment. At around dusk a German attack develops towards Galatos. An Allied counter-attack only partially restores the situation, and it is decided to withdraw 4th NZ Brigade into reserve and form a new line using 5th NZ Brigade. RAF attacks Maleme airfield and destroys some 24 Ju 52s for the loss of seven aircraft.
26 May	The Germans break through the Hania–Galatos line and Allied forces withdraw towards Souda Bay. Freyberg decides on a withdrawal to Sphakion so that the troops can be evacuated by sea.
27 May	Layforce arrives in Souda Bay. Wavell signals to Churchill that Crete is no longer tenable and the Chiefs of Staff order the evacuation of the island. A new defence line is formed, nicknamed '42nd Street', just to the west of Souda Bay. The Germans advance, encircling Force Reserve near Hania, but 100th Gebirgsjäger Regiment is stopped in its tracks by an Allied counter-attack. Allied forces start to withdraw to Sphakion.
28 May	Evacuation starts in earnest with Force 'B' heading for Heraklion and Force 'C' for Sphakion. Italian troops occupy the area of Lasthi.
29 May	Some 700 troops embark at Sphakion, while 4,000 are evacuated from Heraklion, although HMS *Imperial* is sunk and Force 'B' is bombed throughout the day. The Allied rearguard continues to carry out an orderly withdrawal, now pursued by 100th Gebirgsjäger Regiment. Germans now control Heraklion and Rethymnon.
30 May	Force 'D' from Alexandria embarks over 6,000 men at Sphakion with Force 'C' en route back to Crete. Maleme is bombed again by the RAF. Rearguard is now only a few miles from Sphakion.
31 May	Further evacuations are carried out by Force 'C' before dawn with some 1,500 men embarking. Major General Freyberg leaves by Sunderland flying boat while Major General Eric Weston remains in command on Crete.
1 June	Force 'D' conducts the final evacuation with 4,000 men embarking at Sphakion. The remaining Allied forces on Crete capitulate with Weston leaving for Egypt on a flying boat.

objective in good order, and was the procedure adopted for Operation *Market Garden* – the Arnhem assault in 1944 (see pp. 248–93). The alternative is to drop the paratroopers as close to their objective as possible in order to maximize surprise and overwhelm the defenders before they can react effectively. This approach does risk greater disruption and heavier casualties while the paratroopers are still vulnerable.

The latter method was chosen for the assault on the Corinth Canal bridge. Early on the morning of 26 April, once the close air support had pounded the defenders, the German vanguard of parachute engineers, loaded in DFS 230 gliders, landed at either end of the bridge. Having seized the bridge they set to work on the demolition charges. They were followed minutes later by some 200 Ju 52 transport aircraft that dropped two battalions of paratroopers, one at each end of the bridge. The paratroopers quickly overwhelmed the defenders after a short but sharp battle. In almost the last act of the battle, a British Bofors gun fired at the engineers on the bridge and actually touched off some disconnected explosives, which seriously damaged the structure. This cut off Allied troops north of the bridge who were subsequently captured, bringing total Allied losses in Greece to over 11,000 men. However, some 18,000 were evacuated to Crete and another 23,000 eventually made their way to Egypt by various means. The Allies lost a large amount of equipment: almost 200 aircraft, over 100 tanks, some 400 artillery pieces, 1,800 machine-guns and 8,000 vehicles. Total German casualties in the Yugoslav and Greek campaigns amounted to 11,000. The occupation of these two countries would prove a major commitment in terms of men and matériel needed for the rest of the war. With the Balkan campaign at an end, the countdown started to the only strategic use of airborne forces in history, an operation that would prove to be both the Fallschirmjäger's most glorious achievement and their ultimate downfall.

Opposing forces

Allied forces

The battle for Crete was almost exclusively an infantry affair often fought at very close quarters, with hand-to-hand combat taking place quite frequently. The Allied troops on the island had lost much of their heavier weaponry in the campaign for Greece, and while this did not leave them completely without artillery support, it was, in the main, in the form of anti-aircraft guns and coastal artillery units. This meant the Allies had to aim to defeat an enemy invasion before it gained a foothold, rather than overcoming it in a conventional battle. Nine Matilda 'I' tanks from 'B' Squadron, 7th Royal Tank Regiment were present on the island, but despite being heavily armoured, they had only armour-piercing rounds for their 2pdr guns, a serious handicap when engaging infantry. There were also the 16 Mk VIB tanks of 'C' Squadron, the King's Own Hussars, armed with machine-guns. These had seen heavy service in North Africa and were thus prone to mechanical breakdown. The lack of trucks or Bren gun carriers made it difficult to form a proper mobile reserve.

Almost the only conventional artillery on the island were the 34 Italian 75mm field guns captured by the Greeks, and four 2pdr anti-tank guns. The anti-aircraft and coastal artillery was also somewhat meagre, with 14 coastal defence guns (3 and 4in), 20 heavy anti-aircraft guns (3.7in) and 36 light anti-aircraft guns (40mm).

A photograph by A. H. Thomas showing a soldier outside the 7th General Hospital, near Galatos, shortly before the German invasion. Despite the large Red Cross symbol, the hospital suffered some damage from air attack during the invasion but treated large numbers of wounded from both sides during the battle. (Alexander Turnbull Library, DA-11712-F)

The German forces were hardly better off, however. The lightly armed airborne troops were supposed to be reinforced by sea, but of the three flotillas conveying most of the artillery and a company from the 5th Panzer Division, the first was badly mauled by the Royal Navy and the other two aborted. At that point (22 May), the airfield at Maleme was so cratered and littered with wreckage that only a small number of 75mm and 105mm recoilless guns, 37mm and 50mm anti-tank guns and 20mm anti-aircraft guns ever reached the German troops. Where the German forces did have a major advantage over the Allies was the high proportion of automatic weapons that both the paratroopers and mountain troops carried. These weapons, such as the 7.92mm MG34 and 9mm MP40 sub-machine-gun, the latter being carried by one in four paratroopers, proved to be very useful in the close-quarter fighting that developed. The majority of men on both sides, however, were armed with conventional bolt-action rifles, such as the .303in Short Magazine Lee-Enfield (SMLE) or 7.92mm Mauser Kar98k, which had broadly similar characteristics. These were supplemented by hand grenades and pistols, such as the 9mm Browning, .38 Smith & Wesson and 9mm P08 Luger. The Greek units were in as bad a state, or perhaps even worse, as many of them had lost their personal weapons, as well as their helmets and, in some cases, even their boots. In any case, their principal small arm was the outdated 6.5mm Mannlicher-Schönauer M1903.

British

By the time of Operation *Merkur*, Great Britain had been at war for some 20 months. Nevertheless, many of the troops on Crete still lacked any combat experience. Although many men had gone to the recruiting offices immediately after Britain's ultimatum to Germany ran out on 3 September 1939, a number had been told to wait for their official call-up papers. Some had gained experience in the fighting in Norway, Belgium and France, as well as North Africa and Greece, and there still existed a cadre of reservists and professional pre-war regulars, particularly among the NCOs. The fact remained, however, that a substantial number of the troops on Crete, including those serving in the infantry, were 'hostilities only' conscripts who had waited with mixed feelings for the papers to land on their doormat. Some of their junior officers were just as inexperienced, fresh out of Sandhurst and armed with textbook knowledge and a mixture of enthusiasm and apprehension.

Both the world wars were something of an aberration for Britain. For the last two centuries, she had maintained a small but highly professional army designed for colonial warfare and the defence of the empire. Both global conflicts required Britain to rapidly expand her armed forces and fight a continental power with large, capable and well-equipped armed forces that directly threatened the security of the home islands themselves. This expansion meant that for a period of time, the infantry could generally be described as 'enthusiastic amateurs'. This was less applicable to the technical trades, who had the first choice of the better-educated conscripts and those with a professional trade, such as mechanical or electrical engineering, who could serve as engineers, signallers, gunners or drivers. The infantry were drawn from every walk of life except the 'reserved' occupations (such as shipyard workers), including clerks and shop assistants, and were often weak and physically unfit as a result of chronic malnutrition and lack of outdoor exercise, a fact highlighted by the Boer War. Psychologically, they were unprepared not only for the confusion of the battlefield, but also for the complex routine of army life, and tended to be contemptuous of both officers and regulations. Beyond that, however, they proved remarkably adaptable and by 1945 had been moulded into a formidable fighting force.

The basic fighting unit in most of the armies of this period was the infantry battalion, which in the British case nominally consisted of 22 officers and 757 NCOs and other ranks. It consisted of a headquarters, a support company and four rifle companies, each rifle company including an HQ, three platoons and a support section with Bren guns. Each platoon was made up of an HQ and three sections, each of ten men. The battalions, part of an infantry regiment in peacetime, were generally amalgamated into three-battalion brigades for operational use, each part of a three-brigade division. There was no British divisional organizational structure on Crete, merely various artillery units, a couple of armoured formations and Brigadier Chappel's 14th Infantry Brigade. This originally consisted of the 2nd Battalion, the York and Lancaster Regiment; 2nd Battalion, the Black Watch; and 1st Battalion, the Welch Regiment. They were joined by the 1st Ranger Battalion (actually the 9th Battalion, King's Royal Rifle Corps) in April and by the 2nd Battalion, the Leicestershire Regiment, and the 1st Battalion, the Argyll and Sutherland Highlanders in May. Unfortunately, Chappel's brigade lacked much of the support usually associated with a formation of this size and was very weak in organic transport, but the troops that were on the island before the Greek campaign were acclimatized, rested and well dug in.

Major General Eric Weston's Mobile Naval Base Defence Organization (MNBDO) 1, better known later in the war in Burma as 'Viper Force', was a new wartime formation created for the purpose of providing ground defence for naval installations overseas. It consisted of a coastal defence brigade, two anti-aircraft regiments, a searchlight regiment, construction engineers and a battalion of infantry. They left Britain in February 1941 but were forced to take the long route via the Cape of Good Hope and Suez Canal as a result of the build-up of the Luftwaffe in the Mediterranean theatre. Due to an administrative error, most of their heavy equipment was offloaded in Palestine instead of Egypt and all Major General Weston could bring to Crete's defence were some 2,000 men and a few extra 4in coastal guns and 3.7in anti-aircraft guns. Weston was given temporary command of the island garrison when he flew to Crete in March ahead of his men, but the command was transferred to the more experienced Major General Bernard Freyberg, VC, Commanding Officer of the New Zealand Division, at the end of April.

Australians

Apart from the British, the infantry on the island was drawn from three main contingents – the Australians, New Zealanders and Greeks. The Australians differed from the British in being an all-volunteer force and combat veterans, as well as much better fed, physically fit and used to an outdoor life. While they were even more contemptuous of authority than their British counterparts, often addressing officers as 'mate' rather than 'sir', they were remarkably disciplined in battle. Similarly to Britain, Australia had only a small pre-war regular army, but a very large militia, the Citizen Military Force. Political constraints limited the use of these troops to home defence duties only, but in September 1939 the government called for volunteers to form an Australian Imperial Force to serve overseas. The response was tremendous, and eventually resulted in the creation of the 6th, 7th, 8th and 9th Infantry Divisions and a short-lived 1st Armoured Division. The 2nd AIF (the 1st having been formed during World War I) began deploying to the Middle East in January 1940, the first formation to move being the 6th Division, commanded by Lieutenant General Sir Thomas Blamey. As a result of the German invasion of the Low Countries in May 1940, the 18th Brigade was diverted to Britain to assist in its defence and eventually became part of the 7th Division instead. The remaining two brigades, the 16th and 17th, were initially modelled on the quad-battalion structure of World War I, but Blamey remodelled them on the British triangular pattern. The two spare battalions formed the nucleus of a 19th Brigade, which was filled out by another battalion from the 18th Brigade.

Supporting these brigades were the 2/1st, 2/2nd and 2/3rd Field Artillery Regiments, 2/1st Anti-tank Regiment, 2/1st Machine Gun Battalion and 2/1st – 2/3rd Combat Engineer Companies (the '2' representing 2 AIF). Only the 7th Light Battery of the division's anti-aircraft brigade arrived before the campaign started, and so it was an incomplete 6th Australian Division that went to war, first in General O'Connor's triumphant campaign against the Italians in Cyrenaica, and then as part of 'W' Force in Greece. Blamey was then appointed as corps commander and Major General Mackay took command of the division. After the Balkan campaign, just over half of the 14,157 Australians who were evacuated went to Egypt, along with Blamey and Mackay, while the remainder went to Crete, leaving Brigadier Alan Vasey, commander of the 19th Brigade defending the Rethymnon–Georgioupolis sector, as the senior Australian officer.

New Zealanders

The New Zealand infantrymen were in some ways similar to their Australian counterparts, being generally better fed and more physically fit than their British equivalent and used to an outdoor life. They differed in their outlook and psychology to some extent, as New Zealand had never been a penal colony. All, however, shared the proud traditions of the ANZAC Corps at Gallipoli during World War I. As in Australia, there had only been a small standing army in New Zealand prior to the outbreak of war in 1939, but this was backed up by a large militia, known as the Territorial Force. Once again its members were precluded from serving overseas, but here too, the government called for volunteers to form a 2nd New Zealand Expeditionary Force (the 1st again being raised during World War I). One result was that the New Zealand Division (its correct title) is frequently referred to as the 2nd New Zealand Infantry Division. The New Zealand infantry were highly motivated and although lacking the truculence of the Australians, loathed parade ground 'stiffness' and would, on occasion, literally 'go on strike' if they felt they were being treated unfairly. But, like the Australians, once in battle they were superbly disciplined and masters of the bayonet charge, especially the Maoris in Hargest's 5th Brigade.

The expeditionary force began forming in September 1939 and soon consisted of three infantry battalions (18th–20th), which, along with the 4th Artillery Regiment, a company from both the 27th Machine Gun Battalion and 7th Anti-tank Regiment, two companies of engineers and two squadrons of cavalry, formed the 4th Brigade under Brigadier Edward Puttick. Thus elements of the division began deploying to the Middle East in January 1940, but it did not unite as a formation in Egypt until March 1941, still lacking its anti-aircraft regiment. Brigadier James Hargest's 5th Brigade was diverted to Britain, along with the Australian 18th Brigade, and Brigadier A. S. Falconer's 6th Brigade's departure was delayed until August 1940. It arrived just in time for the Greek campaign, and losses during the evacuations to Egypt meant Freyberg was left with just over 7,000 troops from the division on Crete by the time of Operation *Merkur*. On taking command of the garrison, Freyberg promoted the 4th Brigade's commanding officer, Puttick, to command the division, while Brigadier L. M. Inglis took over 4th Brigade.

Greece

World War II started for Greece on 28 October 1940, when it was invaded by the Italians, and ended its first phase with the capitulation to the Germans on 24 April 1941. The Greeks, proud of their hard-won independence from the Turks in the 1820s, have a fierce determination to preserve it. The course of the campaign demonstrated that the Greek soldier was, in general terms, slightly physically and mentally tougher, somewhat better trained, marginally better equipped, much better led and far more motivated than his Italian counterpart. This helps to explain the spectacular reversal of fortunes after the Italian invasion. However, they faced a completely different enemy in the Germans, who were not only better prepared mentally and physically than the Italians, but had far better training, organization, leadership and equipment.

Greece in the 1930s and 1940s was not a wealthy country and could not afford to maintain its entire 430,000-man army on alert, despite the provocations from Mussolini. Thus it did not begin full mobilization until after the Italian invasion. The majority of the army moved against the invading forces while some 70,000 men stayed to defend the Metaxas Line in case Bulgaria or Germany initiated a secondary attack. Three battalions of the 5th 'Kríti' Division were left on Crete, along with the 800-strong Gendarmerie and the Heraklion Garrison Battalion. After the Greek surrender, King George II of the Hellenes was evacuated to Crete along with the remnants of the Greek 12th and 20th Infantry Divisions that had continued to fight alongside 'W' Force. No precise figures are available for the number of men that were re-organized, alongside the existing infantry battalions, into a number of 'regiments' by a British liaison officer, Colonel Guy Salisbury-Jones, but they totalled somewhere in the region of 9,000 troops.

The Royal Navy

The Royal Navy was both feared by the Italians and respected by the Germans, who had very few naval forces of their own in the Mediterranean. Following the fall of France, the Admiralty re-organized and reinforced its forces in the theatre into eastern and western fleets based in Alexandria and Gibraltar respectively, the boundary between the two being the strategically important island of Malta. By May 1941, Admiral Cunningham's eastern Mediterranean fleet had already been depleted by the loss of two destroyers during the evacuation of 'W' Force from Greece, but this was merely a taste of what was to come. Cunningham reported that his ships had expended almost half their anti-aircraft ammunition and that with the available stocks would only be able to replenish them to three-quarters' capacity. The Luftwaffe's Fliegerkorps VIII was now operational from airfields in southern Greece and daylight naval operations were increasingly hazardous, especially during Operation *Merkur*, due to the lack of friendly air cover. The last of the RAF's fighters had been evacuated the day before the invasion began and attrition of the aircraft from the carrier HMS *Formidable* soon undermined their effectiveness. During the battle and the evacuation, Cunningham lost three cruisers and another six destroyers, with three battleships, *Formidable*, six cruisers and seven destroyers damaged. The only consolation was that the German reinforcement convoys were turned back and some 17,000 Allied servicemen were evacuated.

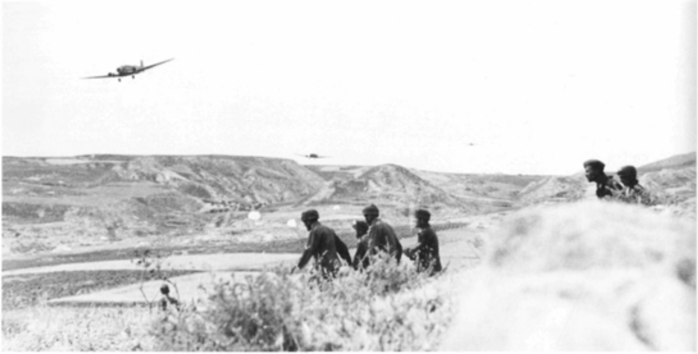
Members of the 28th (Maori) Battalion on the wharf in Alexandria immediately after their arrival from Crete. They were evacuated from Sphakion on 30 May 1941 after performing well throughout the campaign. (Alexander Turnbull Library, DA-09662-F)

Axis forces

Fallschirmjäger

The men of the 7th Flieger Division who spearheaded the assault on Crete were all volunteers. Professionals, tough, physically fit, well trained and with excellent officers at every level, they were highly disciplined and motivated and encouraged to use their initiative whenever possible. They rightly considered themselves an elite corps and the majority were now combat veterans from the campaigns in Norway, Holland, Belgium, France and Greece. While conscription was largely loathed in Britain, it was actually welcomed in Germany as signifying the end of the restrictions of the hated Versailles Treaty, signed at the end of World War I. Loyalty to the Nazi regime amongst the younger generation had been encouraged by a steady stream of Nazi propaganda and many had served in the paramilitary Hitler Youth. Even in the dark inter-war years, the German armed forces had maintained a cadre of high-quality officers and NCOs. This allowed the military to expand rapidly once the terms of the Versailles Treaty had been repudiated. In the early years of the war, before the pernicious effects of the horrific losses on the Eastern Front were felt, the standard of German training, discipline and morale in the armed forces was first rate.

As mentioned previously (see pp. 48–52), the call for volunteers to form the first Fallschirmjäger battalion had gone out in 1936 with a paratrooper training school established at Stendal airfield outside Berlin. The CO of the new battalion was a certain Bruno Bräuer. By the outbreak of war, having consolidated control of the parachute, glider and air transport forces, the Luftwaffe had enough men to form the nucleus of an airborne division under the command of Generalmajor Kurt Student, based at Tempelhof airfield, near Berlin. By 1941, it had grown into a full division, commanded by Generalleutnant



A photograph showing Ju 52s dropping paratroops into a shallow valley (possibly Prison Valley, meaning that the troops are from the 3rd Fallschirmjäger Regiment), which illustrates in stark terms how low the 'low altitude' drops really were. (B. L. Davis Collection)

Wilhelm Süssmann, made of three parachute regiments (1st, 2nd and 3rd Fallschirmjäger Regiments under the command of Bräuer, Sturm and Heidrich) and a semi-autonomous air assault regiment (Luftlande Sturmregiment under the command of Generalmajor Eugen Meindl), supported by artillery, anti-tank, machine-gun and combat engineer battalions. The three parachute regiments had three parachute battalions apiece, while the air assault regiment had three parachute battalions and a glider battalion (under the command of Major Walter Koch). The strength of each parachute battalion averaged around 700 men and comprised three infantry companies, a headquarters company, a support company and a signals section. The entire battalion, along with all its heavy equipment including radios, heavy weapons, ammunition, medical supplies and rations, was airdropped. The equipment was dropped in lightweight containers. Neither the paratroopers nor the containers could be controlled while they descended, as the majority of parachutes used were still the older RZ16 that lacked the lift webs or 'risers' of American and British designs.

5th Gebirgs Division

Instead of the 22nd Luftlande Division (which was guarding the Ploesti oil fields in Romania), the paratroopers would be reinforced by the 5th Gebirgs Division under the command of Generalmajor Julius 'Papa' Ringel. The majority of troops in this division were volunteers and had combat experience, having come from a number of other divisions that had seen service in the Low Countries and Norway before the 5th had started forming in Salzburg in October 1940. The majority of the soldiers were recruited from Austria and the alpine region of southern Germany and were tough, physically fit and highly motivated.

The division was organized along similar lines to a conventional infantry division, although it had only two rifle regiments (85th and 100th Gebirgsjäger Regiments), each with three battalions, and the 95th Gebirgsartillerie Regiment with two artillery battalions along with signals, reconnaissance, anti-tank and engineer battalions. With just under 14,000 men, it was weaker in manpower than a standard infantry division. However, for the Crete campaign, it was reinforced with the 141st Gebirgsjäger Regiment from the 6th Gebirgs Division. Each battalion had the usual three rifle companies, headquarters company and support elements. Neither Ringel nor his men expected their sudden transfer to Student's Fliegerkorps XI as none of them had any experience in airborne warfare, but their contribution to the outcome of the battle cannot be underestimated.

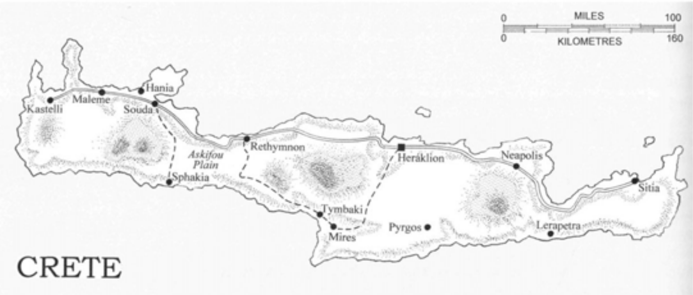
Fliegerkorps VIII

Despite the fact that a large share of the credit can be given to Student's Fliegerkorps XI for victory in the campaign on Crete, some credit is due to the airmen of the other main component of Luftflotte IV, Fliegerkorps VIII, commanded by General Freiherr Wolfram von Richthofen. They proved highly effective in wearing down Allied ground forces and limiting the impact of the Royal Navy on Allied operations. Fliegerkorps VIII comprised seven Geschwader, the equivalent of an RAF group. Three of these were equipped with Ju 87R Stuka dive bombers (Sturzkampfgeschwader 1, 2 and 77), one with Dornier Do 17Z twin-engine bombers (Kampfgeschwader 2), one with a mixture of Ju 88A and Heinkel He 111H twin engine bombers (Lehrgeschwader 1), one with Messerschmit Bf 110C and D twin-engine fighter-bombers (Zerstörergeschwader 26) and one with Messerschmidt Bf 109E single-seat fighters (Jagdgeschwader 77). In addition, Luftflotte IV contained reconnaissance and air–sea rescue units that saved many lives after the Royal Navy intercepted the first of the reinforcement convoys. Fliegerkorps XI itself could also deploy three Geschwader of Junkers Ju 52/3 transports (KGzbV 1–3) and an air-landing group of DFS 230 gliders. It must be remembered that coming so soon after the Balkan campaign, a large number of aircraft were awaiting servicing and a number of aircrew had been killed or injured, limiting the number of aircraft available for Operation *Merkur*.

Opposing plans

Axis plans

With the issuing of War Directive No. 25, preparations for the invasion of Crete could begin, but it took time to assemble the necessary men and equipment, scattered as they were all across Europe. As a result, D-Day for Operation *Merkur* was put back until 20 May, enabling the confused defence of Crete to be put into some sort of order. Logistics also dominated the considerations of the targets to attack, as an airborne attack usually relies on surprise, speed and rapid reinforcement. As the first of these factors had already been compromised, the planners looked at the extent to which they could capitalize on the other two. During the early planning process General der Flieger Alexander Löhr (Commander, Luftflotte IV) favoured a single concentrated drop to seize the airfield at Maleme, followed by a build-up of additional infantry and heavy weapons, and then a conventional advance up the island from west to east. Such an approach, however, might allow the British time to reinforce the garrison, either by sea or by landing troops at either Heraklion or Rethymnon. This could allow them to sustain a defence of the island. Concerned at this prospect and by the slow build-up that would result from the seizure of a single airfield, Generalmajor Kurt Student (Commander, Fliegerkorps XI) suggested no fewer than seven separate drops, the most important being around the airfields at Maleme, Rethymnon and



General Wavell stops to talk to an officer while inspecting a 3.7in anti-aircraft gun position, a number of which were targets for the glider landings on the first day by the Genz and Altmann detachments. Richthofen's Fliegerkorps VIII only lost some 30 aircraft during the battle so their effectiveness against low-flying targets is open to question. (IWM – E1188)

Heraklion, with the focus on Heraklion. Student's plan would enable the Germans to seize all the main strategic points at the outset, so long as resistance on the ground was minimal.

All the planners (including the Kriegsmarine's Konteradmiral Karl-Georg Schuster) agreed, however, that Maleme should be one of the main targets. It was closest to the island's administrative centre, Hania, and Souda Bay, and to the Greek mainland. The latter was important as the 502 operational Ju 52s could not carry all the assault elements in a single drop: the maximum was around 6,000 in one lift. This meant that, even had German intelligence estimates proved correct, the attacking forces would have been at a 1:2 disadvantage. The only answer was to turn the Ju 52s around as quickly as possible to allow a second lift on D-Day. As a back-up the Germans could send a proportion of the assault force by sea, to exploit the foothold gained by the paratroopers. Maleme, being the closest airfield to the mainland, would shorten the time the troopships would be at sea and reduce their vulnerability to interception by the Royal Navy. Finally, Maleme's close proximity to the mainland would allow even Messerschmitt Bf 109 fighters fitted with bomb racks a reasonable amount of flying time over the island, enhancing the potency of available air support.

In the end, Göring imposed a compromise solution between these two different approaches. The drops on D-Day would now be made in two waves: the first in the morning around Hania and the airfield at Maleme, the second in the late afternoon against the airfields at Heraklion and Rethymnon. This would be followed on D+1 by the arrival of the mountain troops of 5th Gebirgs Division under Generalmajor Julius Ringel and the seaborne elements. The assault force on the first day would be split into three groups:

Gruppe West, commanded by Generalmajor Eugen Meindl, consisted of the entire Luftlande Sturmregiment (minus two companies of glider troops that were to be attached to Gruppe Mitte), which would land in the first wave and had the objective of securing Maleme airfield.

Gruppe Mitte, under the divisional commander, Generalleutnant Wilhelm Süssmann, had its first wave consisting of the divisional headquarters along with the two glider companies from the Luftlande Sturmregiment as well as Oberst Richard Heidrich's 3rd Fallschirmjäger

Regiment, reinforced by engineer and AA units. Their objective would be to land in Prison Valley and attack towards Hania and Souda. The second wave would be commanded by Oberst Alfred Sturm and consist of the 1st and 3rd Battalions, 2nd Fallschirmjäger Regiment, with the town of Rethymnon as its objective.

Gruppe Ost, commanded by Oberst Bruno Bräuer and landing in the second wave, consisted of the 1st Fallschirmjäger Regiment, reinforced by the 2nd Battalion, 2nd Fallschirmjäger Regiment with Heraklion as its objective.

Allied plans

German intelligence had badly underestimated the Allied strength on the island. The defence of Greece and Crete was one of the many operations General Sir Archibald Wavell (Commander-in-Chief, Commonwealth Forces Middle East) had been forced to undertake with inadequate resources all around his theatre. There were acute shortages of aircraft, heavy artillery, armoured vehicles and even basic supplies that made his job even more problematic, a situation exacerbated by the losses suffered during the evacuation from Greece, including much of the infantry's organic heavy weapons. In addition many units were now disorganized, and their morale had taken a hard knock. There was no properly functioning radio net and communications proved to be almost non-existent. Nevertheless, the forces on the island numbered some 32,000 Commonwealth troops and 10,000 Greek soldiers, significantly more than the German intelligence estimate of some 10,000 Commonwealth troops and the remnants of ten Greek divisions.

Soldiers Cyril Ericson (holding the map case) and Ernie Avon standing by some discarded German parachutes amongst olive trees near Galatos. Trees and rough ground were always a hazard for parachutists. (Alexander Turnbull Library, DA-00470-F)

Major General Freyberg, commander of the Allied garrison on Crete (known as 'Creforce'), identified five main objectives to defend: the airfields at Maleme, Rethymnon and Heraklion, the administrative centre of Hania and the port at Souda. While his assessments of the nature of the coming assault, its timing and targets were generally good, Freyberg's options were limited. Due to security restrictions surrounding the decoded transcripts of German 'Enigma' transmissions, he had doubts about the quality of the intelligence he received. The garrison, suffering from poor communications and a lack of heavy weapons, was also handicapped by a chronic shortage of motor transport. There was little prospect of effective air cover and no one was sure if the Royal Navy could intervene in any meaningful way in the event of a seaborne threat. Freyberg was thus forced to organize his forces into groups of roughly equal strength, split between the objectives, with a strong eye to defending against a seaborne invasion, as well as the threat from the air.

The New Zealand Division was deployed around the Maleme–Galatos area, under the watchful eye of 'Creforce' Headquarters near Hania, and consisted of the 4th Brigade under Brigadier Inglis (18th, 19th and 20th New Zealand Infantry Battalions), the 5th Brigade under Brigadier Hargest (21st, 22nd, 23rd New Zealand and 28th [Maori] Infantry Battalions) and a new 10th Brigade under Colonel Howard Kippenberger (New Zealand Divisional Cavalry Detachment and the Composite Battalion), as Brigadier Falconer's 6th Brigade had been sent to Egypt.

Major General Eric Weston commanded the Mobile Naval Base Defence Organization (MNBDO) 1 that was concentrated around Souda and reinforced by two composite Australian battalions, named after their parent organizations (16th and 17th Brigades), and the 2/2 Field Artillery Regiment acting as infantry.

1st Battalion, the Welch Regiment (from 14th Brigade), along with the 1st Ranger Battalion (9th Battalion, King's Royal Rifle Corps) and Northumberland Hussars formed a reserve near Hania.

Brigadier Vasey's reinforced 19th Australian Brigade, consisting primarily of 2/1st, 2/7th, 2/8th and 2/11th Infantry Battalions, three batteries from the 2/3rd Field Regiment, some engineers and machine-gun troops, was deployed around Rethymnon and Georgioupolis.

Brigadier Chappel's 14th Brigade defended Heraklion and consisted of: 2nd Battalion, the Leicestershire Regiment; 2nd Battalion, the York and Lancashire Regiment; 2nd Battalion, the Black Watch; 1st Battalion, the Argyll and Sutherland Highlanders (who were still at Tymbaki when the invasion took place); and the Australian 2/4th Infantry Battalion (from 19th Brigade).

Finally, the Greek forces were divided as follows: the 1st, 6th and 8th Regiments in the Maleme–Galatos area; the 2nd Regiment in the Souda–Hania area; the 4th and 5th Regiments along with the Gendarmerie were stationed in the Rethymnon–Georgioupolis area; while the 3rd and 7th Regiments and the Garrison Battalion were deployed around Heraklion. Despite misgivings about their performance from many Allied officers, the Greeks would put up a stubborn fight, helped by the acquisition of weapons from dead paratroopers and the occasional weapons container.

In fact, the British picture of German intentions was far better than the German information on Allied dispositions. From the end of April, a stream of 'Ultra' intelligence, decrypted by the code-breaking office at Bletchley Park, indicated that the Germans were very near to launching an all-out airborne invasion of Crete with the emphasis being on the capture of the airfields, and then following that up with air transport of reinforcements, with some coming by sea. Additionally, it was very difficult for Löhr to conceal the build-up of Luftflotte IV in Greece. This information was passed along to Freyberg, but its impact was diluted to protect the secret of the 'Ultra' breakthrough. Freyberg was told that the information had come from 'highly placed spies in Athens'. In fact, 'Ultra' proved to be something of a double-edged sword in that the information coming from the German 'Enigma' transmissions was, in the main, pretty reliable, but it was not always complete and the analysts at Bletchley Park often made mistakes in trying to fill in the gaps. In this case they believed that 5th Gebirgs Division had been attached to Fliegerkorps XI in addition to the 22nd Luftlande (Airlanding) Division, rather than replacing it, and that the Italian Navy would provide proper support so that the seaborne force would be proportionately larger and the greater threat. As a result it was the seaborne threat, rather than the airborne one, that caused Freyberg the greatest worry.

Further confirmation came when a German Bf 110 crashed in Souda Bay. It was found to contain the map case and operational order for the 3rd Fallschirmjäger Regiment, and a summary of the whole operation. The Greeks made the discovery and, unfortunately, despite the fact that it confirmed their own intelligence, the British command decided it was a ruse. Furthermore, it did not fit in with preconceived British ideas, and thus Freyberg continued to concentrate on the seaborne element of the operation with his units spread along the coast. The Allies failed either to concentrate their defence around the airfields or to put them beyond use; the RAF, convinced it would eventually return in strength, prevented the latter. There was also only a small Allied reserve in the event that the Germans captured an airfield. The scene was set, therefore, for one of the most daring uses of airborne troops in history, the German attackers with a dreadfully inadequate picture of their target and enemy, the Allies effectively looking in the wrong direction.

German paratroopers from the 3rd Fallschirmjäger Regiment slowly drifting to the ground, near Galatos on 20 May 1941. Many of the paratroopers who landed in this area made their way south-east to find the main body of their regiment. (Alexander Turnbull Library, DA-11975-F)

The assault on Crete

On the morning of 20 May 1941, D-Day for the German invasion of Crete, the sun rose into a clear sky with very little breeze, promising a hot, early summer's day. Even before dawn, however, at Greek airfields such as Megara, Corinth and Tanagra, the Ju 52s from Fliegerkorps XI, with their paratroopers aboard, fired up their engines and started to taxi for take-off. There were problems immediately as the first few transports left huge clouds of dust on the dry, unmetalled runways. It took time for the dust to settle, playing havoc with the carefully planned timetable. Eventually, however, the Ju 52s formed up and then headed for their objectives. Unfortunately, one of the first German casualties was Generalleutnant Wilhelm Süssmann, commanding officer of the 7th Flieger Division, who was aboard a glider that cut across the slipstream of a Heinkel He 111. The glider separated from its towrope and crashed on the island of Aegina, killing the occupants. Süssmann was due to drop as part of the first wave, with his divisional headquarters landing alongside 3rd Fallschirmjäger Regiment in Prison Valley.

Maleme, 20 May

Before the main body of the first wave had reached the coast of Crete, Fliegerkorps VIII had started to soften up the defences of the island, and the glider companies of the Luftlande Sturmregiment that were to support Gruppe West had started to land around 08.00hrs. The initial glider landings just to the west of Maleme proved relatively successful and the paratroopers from Oberleutnant Wulf von Plessen's detachment (3rd Company) and part of the regimental headquarters detachment under Major Franz Braun managed to land in the river bed, capture the bridge over the Tavronitis, knock out the anti-aircraft positions and secure a bridgehead on the western outskirts of the airfield, despite both commanders being killed. The 4th Company under Hauptmann Kurt Sarrazin and the battalion headquarters with Major Walter Koch came down around Hill 107, defended by A and B Companies of the 22nd New Zealand Infantry Battalion under Major S. Hanton and Captain K. Crarer, respectively. The paratroopers suffered heavy casualties with Sarrazin killed and Koch wounded in the head soon after landing; the survivors were scattered across the hillside.

The 3rd Battalion, under Major Otto Scherber, started dropping at this point and landed right on top of the New Zealand defensive positions just south of the coast road. The 9th (Witzig), 11th (Jung) and 12th (Gansewig) Companies came down on top of parts of the 21st, 22nd and 23rd New Zealand Infantry Battalions, and the 10th Company (Schulte-Sasse) landed very near to the Field Punishment Centre and New Zealand Engineer Group. The battalion suffered very badly as a result, some being killed as they dropped[1] and many being killed as they searched for weapons containers. Small groups of survivors did form quickly, however, and set about locating isolated defensive positions where they could either carry out hit-and-run attacks or wait for relief.

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[1] *Tests done later in the war refuted Allied claims to have killed many Fallschirmjäger while they descended. It took an average of 340 rounds by a trained marksman to achieve a hit at 150m – it rose to 1,708 rounds at twice that distance.*

Meanwhile, the 4th Battalion under Hauptmann Walther Gericke, along with part of the regimental headquarters, landed west of the Tavronitis, minus the 16th Company under Oberleutnant Höfeld, which landed further south to act as a flank guard. The 2nd Battalion under Major Edgar Stentzler landed east of Spilia, while a platoon under Leutnant Peter Mürbe landed away to the west with the intention of capturing the unfinished airfield near Kastelli. Both formations had a much easier time of it than their comrades as they were further away from the New Zealand defensive positions and hidden by the dust clouds kicked up by continued Luftwaffe ground support and the landing of the glider troops. They managed to land and form up relatively intact. Meindl, realizing that things had gone awry with the landings, especially those of the 3rd Battalion, collected the forces at his disposal around his headquarters and dug in on the airfield's perimeter and ordered Stentzler to take the 5th (Herterich) and 7th (Barmetler) Companies from his battalion and capture Hill 107, the key to Maleme airfield, with a long sweeping flank march to the south. Soon after this both Meindl and his adjutant, Oberleutnant von Seelen, were wounded and so Gericke took command, as the most senior surviving officer.

As the paratroopers managed to collect themselves, they started to make their presence felt with the 22nd New Zealand Battalion, under the command of Lieutenant Colonel L. W. Andrew, VC. Andrew had been wary of his mission to defend not only the airfield but also quite a wide area around it, including Maleme village and Hill 107 (also known as Kavkazia Hill). In order to do this, he was forced to spread his companies so thinly that they could not support each other, and he had no reserve with which to react to any crisis. By late afternoon the paratroopers under Gericke had forced their way into the RAF camp, capturing a codebook intact that outlined the Allied order of battle, and were attempting to move east along the road. The two companies under Stentzler eventually made contact with A and B Companies defending Hill 107 and started to exert pressure from the south-west. All this, and the impact of the Luftwaffe bombardment, affected the judgement of Lieutenant Colonel Andrew as to whether his battalion could hold its positions, given the dispersed nature of its deployment. He had been wounded during the air attack and

A Ju 52 goes down in flames after being hit by anti-aircraft fire over Heraklion airfield on 20 May 1941. It can be seen that a number of paratroopers, probably from the 1st Fallschirmjäger Regiment, have still managed to jump from it. While the Ju 52 was quite vulnerable to anti-aircraft fire (as are all transports at the moment they are dropping paratroopers) the majority of losses occurred at Maleme. (IWM – A4144)

German paratroopers dropping from Ju 52 transport aircraft during the first hours of the invasion. This sight would have greeted many of the Allied troops defending Crete on that first day. The Ju 52 carried three crew and up to 17 air-landing troops, or 13 paratroopers, as well as up to four equipment containers with the static lines attached to the bomb shackles or under-wing racks. (IWM – E3265E)

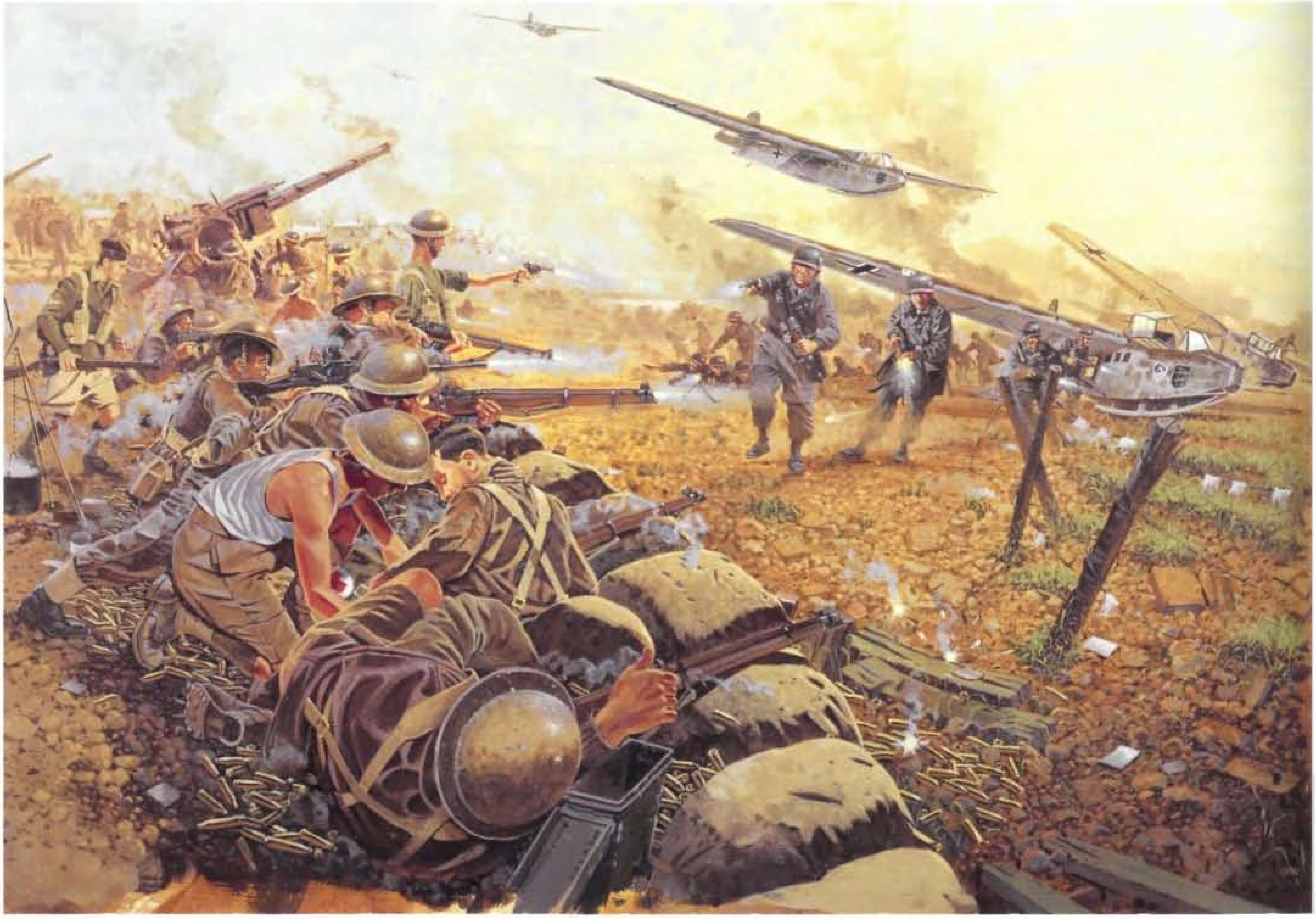
with the increasing fighting all around his perimeter, he called to request that brigade HQ release the 23rd New Zealand Battalion in order to conduct a counter-attack at around 17.00hrs. This request was refused by Brigadier Hargest as both the 22nd and 23rd Battalions were already engaged with paratroopers dropping all over the brigade area.

Andrew then ordered his C Company (Captain S. H. Johnson) to conduct a local counter-attack with the support of two tanks, towards the bridge over the Tavronitis. Unfortunately, mechanical failure soon brought their advance to a halt and the counter-attack failed. As the day wore on, the situation grew gradually worse for Andrew as he lost contact with his forward companies, was forced to withdraw his headquarters to the reverse slopes of Hill 107, and the wireless communication with brigade HQ gradually deteriorated. He signalled Hargest that he might have to withdraw his battalion, to which he received the reply 'If you must, you must.' Hargest did, however, signal that two companies were being sent to Andrew's support, and that they would proceed with all haste. Andrew therefore decided to hang on a while longer in the hope that communications with his companies might be re-established, and that some form of relief might arrive.

Elsewhere in the brigade area, the remaining battalions had been kept busy but had gradually gained control of the situation. The New Zealanders had badly mauled Scherber's 3rd Battalion, and so the 23rd New Zealand Infantry Battalion, under Lieutenant Colonel D. F. Leckie, communicated that it was ready to support the 22nd if needed. At around 14.25hrs he received a message from Hargest that so far the reports coming in were satisfactory and they would only be called upon if the situation became serious. While Leckie still had misgivings about Andrew's situation, he held his position and awaited further orders. At around dusk, he did despatch A Company under Captain C. N. Watson to reinforce the 22nd as per Hargest's message to Andrew. The 28th (Maori) Battalion under Lieutenant Colonel G. Dittmer despatched its own B Company under Captain Royal shortly afterwards. The same was true of the 21st New Zealand Infantry Battalion under Lieutenant Colonel J. M. Allen, whose orders allowed some flexibility as to when and where he might launch a local counter-attack. His communications were almost non-existent, however, and he could only keep in contact with Leckie by runner. Lack of contact with brigade HQ left him with very little information on what was happening elsewhere in the brigade area. All he knew was that paratroopers had been seen advancing on Hill 107 from the south, but decided he could not take any action on his own initiative at the moment.

Hania/Prison Valley – Gruppe Mitte, first wave

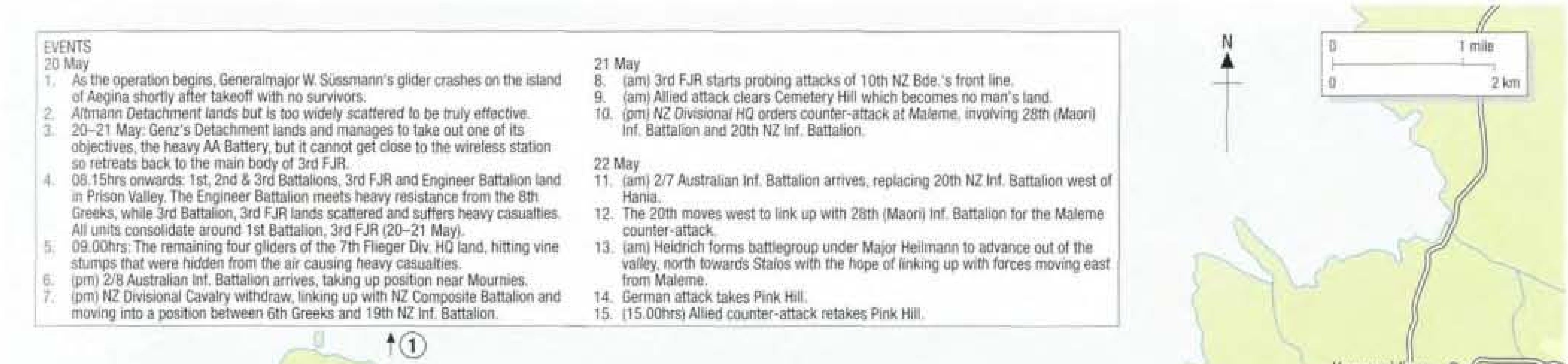
The first wave of Gruppe Mitte consisted of the glider detachments under Leutnant A. Genz and Hauptmann G. Altmann. These would land and silence the anti-aircraft guns on the Akrotiri peninsula, as well as an anti-aircraft battery and wireless station south of Hania. Altmann's detachment became dispersed during the flight and experienced heavier than expected anti-aircraft fire. Finding it difficult to identify their landing sites, they came down widely scattered and were given a rough reception by the companies from the Welch Regiment. The survivors managed to hold out for some time, conducting hit-and-run attacks, but were eventually captured. The smaller detachment under Genz landed and successfully knocked out the AA battery, but could not get near the wireless station. They moved south to join the main body, making their way through Allied lines thanks to Genz's excellent English.



Genz Glider Detachment landing south-west of Hania, morning 20 May 1941. Though three were lost on the way to their objective, the remaining DFS 230 gliders of Genz's Nr. 1 Kompanie landed close to the AA site, which was manned by a troop of the 234th Heavy AA Battery. Despite the troop's attempts to engage the attackers, the glider troops succeeded in putting the AA battery out of action, helping to clear the way for the 3rd Fallschirmjäger Regiment's landings in the central sector. (Howard Gerrard © Osprey Publishing Ltd)

The gliders were followed at around 08.15hrs by the three battalions of 3rd Fallschirmjäger Regiment under Oberst Richard Heidrich, supported by the Parachute Engineer Battalion and a number of heavy weapons companies. All had good landings but were slightly under strength as problems on the airfields in Greece had reduced the number of transports available. It was quickly realized that the analysis of the available maps and aerial photographs had been inadequate and the Germans found themselves in a shallow valley, rather than on a plateau. Heilmann's 3rd Battalion suffered from a rather dispersed landing and encountered strong resistance from Allied forces in the area, chiefly elements of the 4th and 10th New Zealand Brigades. Some landed to the north near the 18th New Zealand Battalion (Lieutenant Colonel J. R. Gray), while others dropped around the 6th Greek Regiment and 19th New Zealand Battalion (Major C. A. Blackburn) area. Many of these were captured or killed, but a number landed unmolested to the south and managed to join up with the 1st Battalion. The Engineer Battalion, meanwhile, had a rough reception from the 8th Greek Regiment around Episkopi. However, Heydte's 1st and Derpa's 2nd Battalions landed very well and succeeded in capturing the village of Agia with minimum resistance, where Heidrich set up the regimental command post. They were joined by the survivors of the divisional command post, which had landed nearby in an area dotted with tree stumps that caused severe damage to a number of gliders.

Souda Bay/Prison Valley, 20–22 May.



EVENTS

20 May

1. As the operation begins, Generalmajor W. Süssmann's glider crashes on the island of Aegina shortly after takeoff with no survivors.
2. *Altmann Detachment lands but is too widely scattered to be truly effective.*
3. 20–21 May: Genz's Detachment lands and manages to take out one of its objectives, the heavy AA Battery, but it cannot get close to the wireless station so retreats back to the main body of 3rd FJR.
4. 08.15hrs onwards: 1st, 2nd & 3rd Battalions, 3rd FJR and Engineer Battalion land in Prison Valley. The Engineer Battalion meets heavy resistance from the 8th Greeks, while 3rd Battalion, 3rd FJR lands scattered and suffers heavy casualties. All units consolidate around 1st Battalion, 3rd FJR (20–21 May).
5. 09.00hrs: The remaining four gliders of the 7th Flieger Div. HQ land, hitting vine stumps that were hidden from the air causing heavy casualties.
6. (pm) 2/8 Australian Inf. Battalion arrives, taking up position near Mournies.
7. (pm) NZ Divisional Cavalry withdraw, linking up with NZ Composite Battalion and moving into a position between 6th Greeks and 19th NZ Inf. Battalion.

21 May

8. (am) 3rd FJR starts probing attacks of 10th NZ Bde.'s front line.
9. (am) Allied attack clears Cemetery Hill which becomes no man's land.
10. *(pm) NZ Divisional HQ orders counter-attack at Maleme, involving 28th (Maori)* Inf. Battalion and 20th NZ Inf. Battalion.

22 May

11. (am) 2/7 Australian Inf. Battalion arrives, replacing 20th NZ Inf. Battalion west of Hania.
12. The 20th moves west to link up with 28th (Maori) Inf. Battalion for the Maleme counter-attack.
13. (am) Heidrich forms battlegroup under Major Heilmann to advance out of the valley, north towards Stalos with the hope of linking up with forces moving east from Maleme.
14. German attack takes Pink Hill.
15. (15.00hrs) Allied counter-attack retakes Pink Hill.

N
0 1 mile
0 2 km
Kounoupidiana
Altmann Detachment
Creforce
XXX
FREYBERG
Hania (Canea)
Maleme & Kastelli
Platanias
Agia Marina
28th (Maori)
5th
5th NZ
HARGEST
4th NZ
INGLIS
18th NZ
4th
10th NZ
KIPPENBERGER
Comp
10th
20th NZ
4th
Stalos
Wheat Hill
Galatos
Daratsos
2nd NZ
19th NZ
4th
Signal Hill
(Mt Monodendri)
20 May
Ruin Hill
Pink Hill
Cemetery Hill
Galaria
1st Royal Perivoli Ans
Suda
Genz Detachment
Suda Area
WESTON
1st Welch
Suda
1st Ranger
Suda
Souda (Suda)
Kirtomados
Div Cav
10th
2nd
3rd
20-21 May
6th Greek
10th
20-21 May
3rd
3rd
Pirgos
Prison
3rd
20-21 May
7th
7th
Agia
20 May
1st
3rd
Prison Valley
20-21 May
Perivolia
Mournies
Dock Defences
2/7 Australian
19th
Rethymnon
2/8 Australian
19th
Tsikalaria
Nerokouros
Varipetro
8th Greek
10th
2nd Greek
Suda
Malaxa
Alikanos
①
②
③
④
⑤
⑥
⑦
⑧
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⑮

Heidrich quickly consolidated his force and started to probe towards Galatos. After the New Zealand Divisional Cavalry Detachment withdrew from its exposed positions, eventually linking up with the Composite Battalion, Heidrich also established a position on Pink Hill. At this point, Kippenberger was pressing divisional HQ for reinforcements with which to conduct a counter-attack. He expected more paratroopers to be dropped at any moment and to face a serious attack tomorrow. Puttick eventually agreed to a counter-attack, after hearing rumours that the Germans were constructing a landing ground, but only by a single battalion and some light tanks from 4th New Zealand Brigade (Inglis). In fact only two companies of the 19th New Zealand Battalion were sent, supported by a troop of light tanks under Lieutenant R. Farran, to cover the possible landing ground with fire, but they had difficulty in finding their way in the darkness and were pulled back after a few brief skirmishes.

By early afternoon, things were looking bleak for the Germans, with the bridge over the Tavronitis being the only objective secured. Casualties were mounting quickly, especially amongst the junior commanders, and many pockets of Fallschirmjäger were pinned down. None of this was known to Generalmajor Student, who ordered the second wave to commence deployment. The German timetable once again began to go wrong as the aircraft had to be refuelled by hand. In addition there was a continuing problem with dust clouds hanging over the runways and Greek partisan activity, which interfered with the civilian telephone system that the Germans were using to coordinate their flights. The result was that the air support arrived over the island some time before the second wave of Fallschirmjäger. The paratroopers' aircraft were also forced to take off in small groups with the result that the Fallschirmjäger were delivered in penny packets spread over several hours.

Rethymnon – Gruppe Mitte, second wave

At Rethymnon, the second wave of Gruppe Mitte, some 1,500 strong, consisted of the 2nd Fallschirmjäger Regiment (less the 2nd Battalion) under Oberst Alfred Sturm, supported by a powerful force of ancillary troops. Sturm had divided his force into three groups: the first based around the 1st Battalion under Major Kroh, the second based around the 3rd Battalion under Hauptmann Weidemann reinforced with a machine-gun company, and the third around the regiment HQ under Sturm himself. The unit dropped on top of part of the 19th Australian Brigade and the 4th and 5th Greek Regiments. The drop was again scattered but at least they faced fewer opponents than at Heraklion. However, in this case the widely dispersed drop and the incomplete information used for planning worked in the Germans' favour. Two companies of the 3rd Battalion landed to the west of the 19th Brigade's positions, formed up and headed west towards their objective at Rethymnon. They unexpectedly ran into fierce resistance from civilians and the Greek Gendarmerie, and so were unable to take the town. Rather than take heavy casualties in mounting a frontal attack, Weidemann decided to fall back and establish a strong defensive position around the village of Perivolia.

The remaining two companies of the 3rd Battalion and two companies from the 1st Battalion dropped around the 2/1 Australian Battalion's positions, while the 3rd Company (1st Battalion) and the battalion HQ under Kroh landed away to the east. The 2nd Company and the regimental HQ landed right in the middle of the Allied positions and faced rapid counter-attacks from the Australians and the Greeks, directed by Lieutenant Colonel Ian Campbell, who as well as commanding the area retained command of his own battalion, the 2/1. Sturm and his HQ were captured. The Germans to the east assembled quickly and moved westwards to support their comrades. This force under Major Kroh managed to put in a strong attack and succeeded in taking the majority of Hill A, which overlooked the eastern end of Rethymnon airfield. They dug in but faced numerous Australian counter-attacks. Campbell attempted to use his tanks in one attack but one tank became stuck in a gully, and the other fell into a ravine some 8ft (2.4m) deep. As the day wore on, it became increasingly critical for Campbell to counter-attack and dislodge the Germans on Hill A. He contacted Freyberg with a request for reinforcements but was told that none were available – he was on his own. He resolved to counter-attack with everything he had at first light the next day.

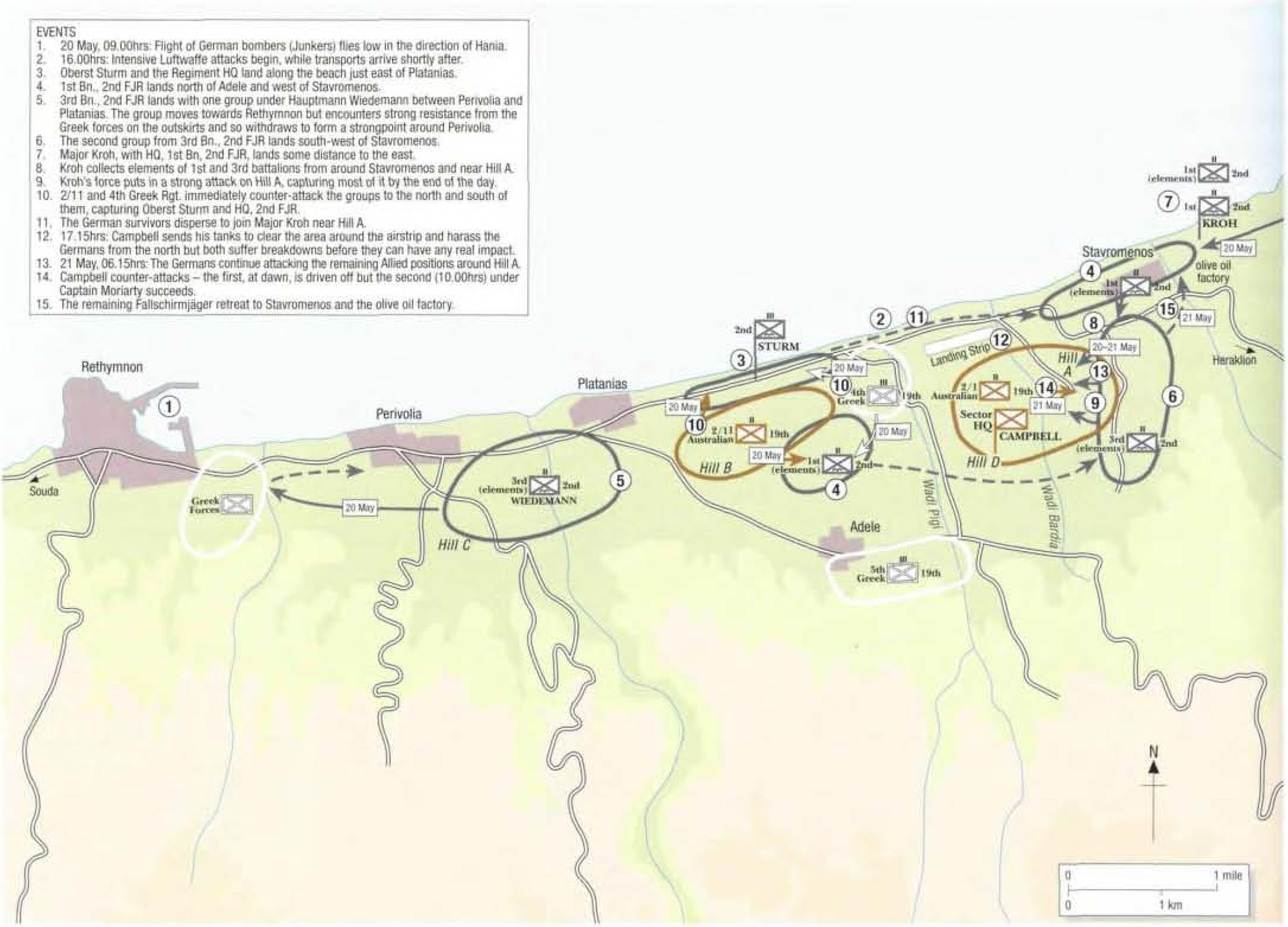
Heraklion

The 1st Fallschirmjäger Regiment under Oberst Bruno Bräuer, reinforced with the 2nd Battalion, 2nd Fallschirmjäger Regiment and additional support troops (in all, almost 3,000 men), dropped around Heraklion and suffered as much as any of the other formations dropped that day. The Heraklion area was far easier to defend than the Maleme area, allotted to the New Zealand Division west of Hania, as it was smaller and both the town and the airfield could be enclosed within a perimeter some four miles across and two miles deep. While the defenders at Heraklion did not start to receive word of the parachute drops further west until shortly before Bräuer and his men started landing, a warm welcome would still be waiting for them. Accounts differ as to exactly when word started to reach brigade HQ but it seems to have started to filter through between 14.30 and 15.00hrs as no alert seems to have been issued from brigade HQ before then, with many British officers still on official and unofficial business away from their units.

These two recently landed paratroopers, probably from the 3rd Fallschirmjäger Regiment, look towards the smoke rising above Souda Bay. One carries a Mauser Kar 98k rifle and MP40 sub-machine-gun on his back, while the other has hefted his MP40 onto his shoulder. While the Kar 98k had a longer range and greater accuracy, the MP40 was more compact, lighter and had a higher rate of fire, making it more suitable for airborne troops. (B. L. Davis Collection)

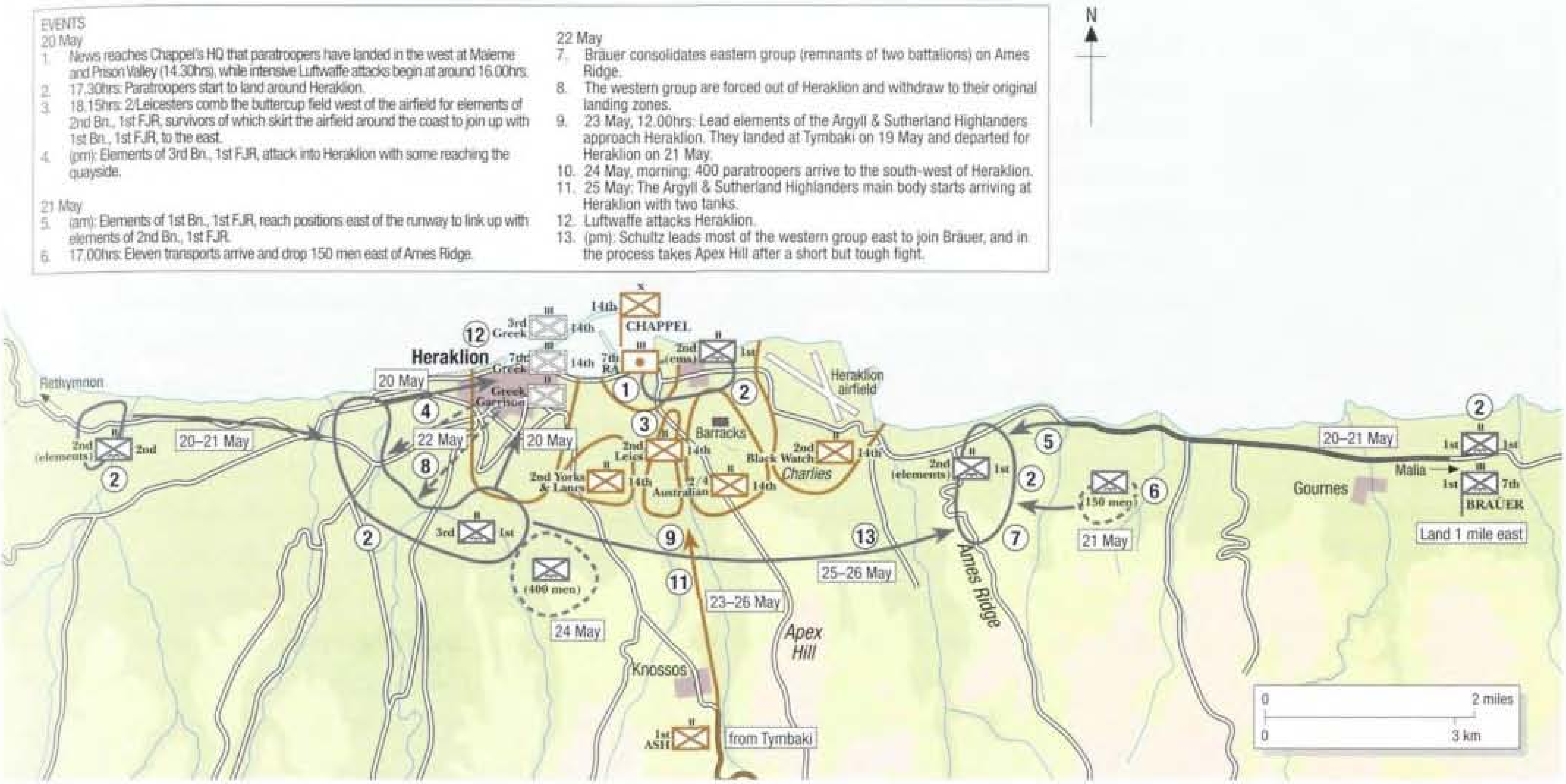
The paratroopers of the 1st Fallschirmjäger Regiment dropped onto and around the 14th Infantry Brigade, commanded by Brigadier B. H. Chappel. The 2nd Battalion under Hauptmann Burckhardt dropped from west to east across the airfield following the line of the coast road and were caught in a crossfire between 2nd Leicesters, 2/4 Australian Battalion and 2nd Black Watch. Small-arms and anti-aircraft fire greeted the transport aircraft and paratroopers as they fell, mainly into open spaces with little cover. This meant that it was easier to locate the all-important weapons containers, but considerably riskier to try to retrieve them. Under orders from Chappel, the 2nd Leicesters sent out fighting patrols around 18.15hrs, supported by a few Bren carriers to clear the 'Buttercup Field' (see illustration p. 108). However, several groups of paratroopers had managed to assemble and took cover in a number of abandoned buildings. They were left to be taken care of later. The 3rd Battalion under Hauptmann Karl-Lothar Schulz managed to drop just west of the town without too much trouble and started to move eastwards, encountering elements of the Greek Garrison Battalion and groups of civilians at the Hania Gate. These had to be overcome before the Fallschirmjäger could move into the town itself. The 1st Battalion under Major Erich Walther landed with the regimental HQ further to the east and was relatively intact. Bräuer quickly sensed that the landing had run into trouble, however; to

Rethymnon, 20–21 May.



EVENTS
1. 20 May, 09.00hrs: Flight of German bombers (Junkers) flies low in the direction of Hania.
2. 16.00hrs: Intensive Luftwaffe attacks begin, while transports arrive shortly after.
3. Oberst Sturm and the Regiment HQ land along the beach just east of Platanias.
4. 1st Bn., 2nd FJR lands north of Adele and west of Stavromenos.
5. 3rd Bn., 2nd FJR lands with one group under Hauptmann Wiedemann between Perivolia and Platanias. The group moves towards Rethymnon but encounters strong resistance from the Greek forces on the outskirts and so withdraws to form a strongpoint around Perivolia.
6. The second group from 3rd Bn., 2nd FJR lands south-west of Stavromenos.
7. Major Kroh, with HQ, 1st Bn, 2nd FJR, lands some distance to the east.
8. Kroh collects elements of 1st and 3rd battalions from around Stavromenos and near Hill A.
9. Kroh's force puts in a strong attack on Hill A, capturing most of it by the end of the day.
10. 2/11 and 4th Greek Rgt. immediately counter-attack the groups to the north and south of them, capturing Oberst Sturm and HQ, 2nd FJR.
11. The German survivors disperse to join Major Kroh near Hill A.
12. 17.15hrs: Campbell sends his tanks to clear the area around the airstrip and harass the Germans from the north but both suffer breakdowns before they can have any real impact.
13. 21 May, 06.15hrs: The Germans continue attacking the remaining Allied positions around Hill A.
14. Campbell counter-attacks – the first, at dawn, is driven off but the second (10.00hrs) under Captain Moriarty succeeds.
15. The remaining Fallschirmjäger retreat to Stavromenos and the olive oil factory.

Rethymnon
Souda
Perivolia
Platanias
Adele
Stavromenos
olive oil factory
Heraklion
Landing Strip
Hill A
Hill B
Hill C
Hill D
Wadi Pigi
Wadi Bardia
Greek Forces
3rd (elements) 2nd WIEDEMANN
2nd STURM
2/11 Australian 19th
4th Greek 19th
1st (elements) 2nd
5th Greek 19th
2/1 Australian 19th
Sector HQ CAMPBELL
3rd (elements) 2nd
1st (elements) 2nd
1st 2nd KROH
20 May
21 May
20–21 May
N
0 1 mile
0 1 km



EVENTS

20 May
1. News reaches Chappel's HQ that paratroopers have landed in the west at Maleme and Prison Valley (14.30hrs), while intensive Luftwaffe attacks begin at around 16.00hrs.
2. 17.30hrs: Paratroopers start to land around Heraklion.
3. 18.15hrs: 2/Leicesters comb the buttercup field west of the airfield for elements of 2nd Bn., 1st FJR, survivors of which skirt the airfield around the coast to join up with 1st Bn., 1st FJR, to the east.
4. (pm): Elements of 3rd Bn., 1st FJR, attack into Heraklion with some reaching the quayside.

21 May
5. (am): Elements of 1st Bn., 1st FJR, reach positions east of the runway to link up with elements of 2nd Bn., 1st FJR.
6. 17.00hrs: Eleven transports arrive and drop 150 men east of Ames Ridge.

22 May
7. Bräuer consolidates eastern group (remnants of two battalions) on Ames Ridge.
8. The western group are forced out of Heraklion and withdraw to their original landing zones.
9. 23 May, 12.00hrs: Lead elements of the Argyll & Sutherland Highlanders approach Heraklion. They landed at Tymbaki on 19 May and departed for Heraklion on 21 May.
10. 24 May, morning: 400 paratroopers arrive to the south-west of Heraklion.
11. 25 May: The Argyll & Sutherland Highlanders main body starts arriving at Heraklion with two tanks.
12. Luftwaffe attacks Heraklion.
13. (pm): Schultz leads most of the western group east to join Bräuer, and in the process takes Apex Hill after a short but tough fight.

N
Heraklion
Rethymnon
Heraklion airfield
CHAPPEL
14th
3rd Greek
7th Greek
Greek Garrison
7th RA
2nd (ems)
1st
Barracks
2nd Leics
2nd Yorks & Lancs
2/4 Australian
2nd Black Watch
Charlies
2nd (elements)
3rd
(400 men)
(150 men)
Ames Ridge
Apex Hill
Knossos
1st ASH
from Tymbaki
Gournes
Malia
BRAUER
Land 1 mile east
20 May
20–21 May
22 May
21 May
24 May
23–26 May
25–26 May
0
2 miles
3 km

Heraklion, 20–26 May.

drop single battalions in this way had been a mistake. The regimental HQ and the 1st Battalion quickly assembled and moved westwards to join up with whatever remained of the 2nd Battalion. The 2nd Battalion, 2nd Fallschirmjäger Regiment, under Hauptmann Gerhard Schirmer, dropped unscathed even further to the west[2] to act as a blocking force on the coast road. Chappel had lost no time in counter-attacking, but remained on the defensive as he was unsure exactly how many paratroopers had landed in the area and whether there might be more on the way. For the time being he would wait to be reinforced by the 1st Battalion, Argyll and Sutherland Highlanders, and organize a counter-attack into Heraklion to drive out Schulz's 3rd Battalion which had managed to gain a foothold in the town.

Nightfall, 20 May

By the end of the first day, the Fallschirmjäger were hanging on by their fingernails. Had Freyberg used his superiority in men and matériel to counter-attack at this point, he might have caused the entire German operation to collapse. Alternatively, if he had appreciated the significance of the fighting around Maleme and reinforced the airfield subsequent events may have been very different. Hindsight is a marvellous thing, however, and at the time the situation must have been deeply worrying for Freyberg. He had received a series of reports of huge numbers of enemy Fallschirmjäger dropping all along the north coast of the island and all his garrisons were under attack simultaneously. The picture was made worse by rumours and reports that were difficult to verify due to the increasing problems of both communication and transport that were plaguing the defenders. Two examples of these rumours illustrate the point admirably: the first was that the Germans were constructing a landing strip in Prison Valley, the second that they had landed transport aircraft in the bed of the Tavronitis, as well as on the beaches. The latter rumour probably originated with the glider landings by the detachments under von Plessen and Braun. Such rumours also served to distract Allied attention from the critical importance of the airfields to the German operation. This was precisely the picture that Student, despite Löhr's desire to concentrate the Fallschirmjäger on a single target, had hoped to contrive.

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[2] *Part of 2nd Battalion, 2nd Fallschirmjäger Regiment, had to be left behind in Greece due to the lack of space on the available transports.*

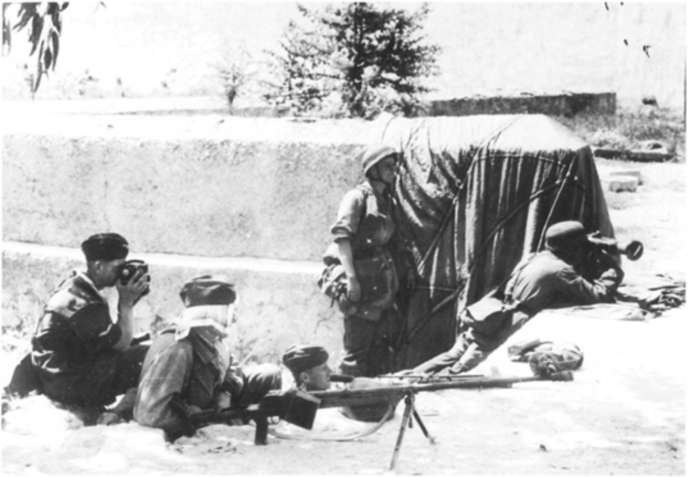
Nevertheless, Student was in a difficult position. As far as he could ascertain, things had gone badly just about everywhere. Heraklion had not fallen, and there was no news, which almost certainly meant bad news, from Rethymnon. There was not a single location anywhere securely in German hands at which the waiting Gebirgsjäger could be landed. However, many of the Allied anti-aircraft and field artillery guns had been silenced, and those that remained were concentrated in the east. Fliegerkorps VIII was pounding the Allies effectively by day, disrupting any daylight counter-attacks. The only possible opening was in the west at Maleme where the Luftlande Sturmregiment had a toehold at both the western end of the runway and the foot of Hill 107.

A large group of German prisoners, some of whom are wounded, being held in a street in Hania. They are probably from the various detachments of the 3rd Fallschirmjäger Regiment that landed near the city on 20 May. They would not have long to wait until the tables were turned. (IWM – E3066E)

The withdrawal at Maleme

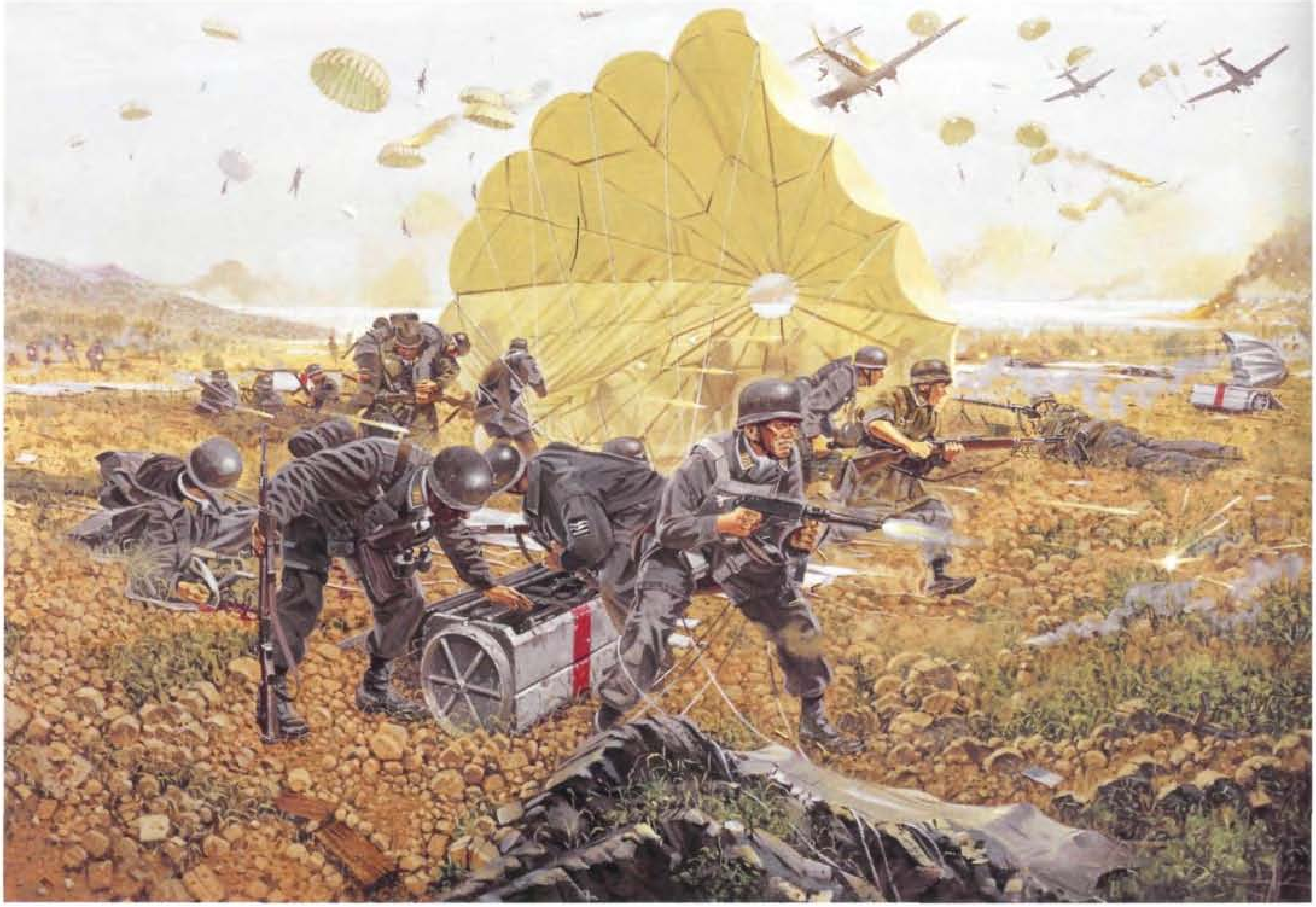
What the Germans were not to discover until the next day was that Lieutenant Colonel Andrew had decided to withdraw the remains of his battalion from their perilously exposed positions. He had been under continued pressure from Stentzler's companies to the south, lost contact with his forward companies and brigade HQ, seen no sign of the promised reinforcements and received an at best unhelpful message from Hargest. He sent out runners to contact his companies, but those making for C, D and Headquarters Companies do not seem to have got through. Andrew then withdrew to a ridge east of Hill 107 where he met up with A Company, 23rd Battalion. B Company from the 28th had reached as far as the airfield, to within 200 yards of the 22nd Battalion's C Company command post, but then having heard German voices, decided that their positions had been overrun and withdrew. Andrew then felt that his position was still too exposed and took the decision to withdraw 1 kilometre (0.6 mile) east to a position between the 21st and 23rd Battalions. This move was copied in turn by the remaining companies of the 22nd who, after losing contact with battalion HQ, received reports from stragglers that the battalion HQ had gone. This one decision handed the battle to the Germans (unless a successful counter-attack was launched) as direct fire could no longer be brought down on the airfield, and the Germans could start to reinforce the Fallschirmjäger with the 5th Gebirgs Division.

An interesting photo of a group of Fallschirmjäger taking cover on some stone steps behind a wall. The man on the left carries a cine camera, while the paratrooper on the right is using a rangefinder. An anti-tank rifle, probably a Panzerbüsche 39, sits just in front of them. It fired a 7.92mm solid tungsten-carbide round and could penetrate 1.3in (3.3cm) of armour at 325ft (100m).The generally relaxed look of the group indicates that this might be a posed shot. (B. L. Davis Collection)



The capture of Hill 107

This process would begin only slowly, however, as there was still sporadic indirect fire coming down on the airfield and, for a while, the Germans did not realize the New Zealanders had vacated their positions. What clinched German control of the airfield was the decision by Dr Heinrich Neumann, the senior medical officer in the Luftlande Sturmregiment, to form a combat group of paratroopers from whoever happened to be close to the regimental aid post and assault Hill 107. A combat veteran of the Spanish Civil War, Neumann had flown over 20 missions as a rear gunner in a Condor Legion Heinkel biplane until told to concentrate on his medical duties! The decimation of the Sturmregiment's officers gave Neumann an unexpected opportunity to once again play an active combat role, and a crucially important one. After telling his assistants to carry on without him, he headed off for Hill 107. He encountered a company of paratroopers under Leutnant Horst Trebes who joined him, and a series of accidental clashes in the dark with Allied troops followed. This episode was subsequently reworked as a story of savage fighting and heroic conquest by an unconventional leader, who later received the Knight's Cross. What was important, however, was that through Neumann's initiative the Germans discovered that Hill 107 was now unoccupied and took control of both it and the airfield.



2nd Battalion, 1st Fallschirmjäger Regiment, landing just west of Heraklion airfield, afternoon, 20 May 1941. The western battlegroup landed in an area known as 'Buttercup Field' and struggled to attain cohesion and locate their weapons containers to set up any sort of defence. Brigadier Chappel immediately counter-attacked with every unit at his disposal, and eliminated the remaining Fallschirmjäger in Buttercup Field and around the airfield. Of the western battlegroup, only five survivors escaped. (Howard Gerrard © Osprey Publishing Ltd)

21 May

Meanwhile Student had spent a sleepless night in the Hotel Grande Bretagne studying maps and the reports coming from Maleme. He noticed that if Hill 107 had been taken, transports could land on the western edge of the airfield out of sight of the defenders. To test his theory, Student despatched a Ju 52 with a staff officer, Hauptmann Kleye, on board. The aircraft landed at dawn on 21 May and luckily the western edge of the airfield did indeed prove to be dead ground, shielding the plane from the New Zealand defenders. Kleye was briefed on the situation and took off again. At 08.00hrs, six aircraft landed on the runway with ammunition and supplies badly needed by the Fallschirmjäger. These aircraft also lifted out a number of the badly injured, including Eugen Meindl. At this point, Student decided to switch his point of maximum effort from Heraklion to Maleme. With Meindl evacuated, Student gave command of the Sturmregiment to Oberst Bernhard Ramcke; he was dropped with those Fallschirmjäger who had not landed the previous day. The paratroopers landed both west and east of the airfield, to respectively reinforce the Sturmregiment and take the defenders in the rear. Unfortunately, it does not seem to have occurred to Student that those dropping to the east might suffer the same fate as Scherber's 3rd Battalion the previous day. The result was largely the same and the Fallschirmjäger once again suffered serious casualties, although the survivors fortified the village of Pyrgos on the road between the airfield and Hania. Those to the west dropped without incident and Ramcke started to re-form the Sturmregiment as a fighting unit. After this, a steady stream of Ju 52s shuttled in and out of Maleme, with the troops from the 100th Gebirgsjäger Regiment starting to arrive from around 17.00hrs.

Meanwhile, the German positions elsewhere on the island proved to be relatively stable. In Prison Valley, the 3rd Fallschirmjäger Regiment, having been resupplied with almost 300 containers, continued to conduct probing attacks along 10th New Zealand Brigade's front, while a local New Zealand attack, supported by Roy Farran's tanks, managed to dislodge an advanced German outpost from Cemetery Hill, which appropriately enough became a no man's land. One heartening episode occurred after the attacks on Pink Hill, as the paratroopers under Heidrich settled into their defensive positions. One of Heydte's platoons, encamped on a small ridge across the valley from the 2/8 Australian Battalion, played dance music on a captured gramophone. When one of the desultory exchanges of fire with the Australians lasted longer than usual, one of the paratroopers shouted, 'Wait a minute, while I change the record!' At Rethymnon, the German forces under Major Kroh continued in their attempts to eliminate the few remaining Allied positions on Hill A, but were forced to retreat after Lieutenant Colonel Campbell launched the second attack of the day at 10.00hrs, the first at dawn having failed. The survivors retreated to form a position around Stavromenos and the olive oil factory. Despite Allied attacks over the next few days, the groups in both the olive oil factory and Perivolia were dug in and proved difficult to evict from their positions. When an Australian attack, supported by some field guns, did penetrate the factory, all they found were German wounded; Kroh and everyone who could walk had escaped.

Around Heraklion, 150 men, unable to land the previous day, landed east of Ames Ridge at around 17.00hrs and reinforced the remnants of the 1st and 2nd Battalions, 1st Fallschirmjäger Regiment, under Bräuer who had established a position on the ridge. As the days wore on, the killing became less impersonal to the British and Australians, and their enemy became less abstract and more human. A tacit agreement was reached that, during the relative quiet of the night, the wounded could be collected, the dead buried and supplies distributed.

In one episode reminiscent of Steven Spielberg's film *Saving Private Ryan*, three German brothers fighting on Crete were caught up in the tragic consequences of war. One outpost that survived from the first day's drops consisted of a platoon led by Leutnant Count Wolfgang von Blücher, a name not unknown to the British Army. It held a position in the midst of the Black Watch. According to the account of the story, the Fallschirmjäger, running short of ammunition and medical supplies, were amazed to see a rider and horse galloping towards them with boxes of supplies. The soldiers of the Black Watch were similarly stunned and only opened fire at the last moment, hitting both horse and rider. Von Blücher asked who the rider was, to be told it was his younger brother Leberecht, and that he was dead. The next morning Wolfgang, the eldest of the three brothers, was killed as the survivors of his platoon were overrun, despite attempts by the main German forces to the east to come to their aid. The youngest of the three brothers, Hans-Joachim, was also killed on Crete but his body was never recovered. For many years afterwards, a number of poor families living in a shanty village in the area reported seeing a ghostly horse and rider, but assumed that the rider was a British officer.

Major Schulz's battalion, after being forced away from the town on 22 May, consolidated their positions and were reinforced by a drop of some 400 remaining paratroopers on the morning of the 25th. Schulz then received orders from Athens to join up with Bräuer by means of an extended march to the south of the Allied positions. This he did late on the evening of 25 May, taking Apex Hill on the way.

A group of Fallschirmjäger moving forward in the foothills of Crete. It is possible they are from the 3rd Fallschirmjäger Regiment advancing towards the Allied positions near Perivolia, 26 May 1941. The terrain of Crete quickly became more rugged as one moved inland from the coast. (B. L. Davis Collection)

What the Germans feared most at this point was a strong local counter-attack to force them away from Maleme airfield. Certainly there were enough forces in the area with the 21st, 22nd, 23rd and 28th (Maori) New Zealand Battalions, along with the 4th New Zealand Brigade as yet uncommitted near Hania. Unfortunately for the defenders, the continued air bombardment, the surprise at a novel form of warfare, the absence of good communications and the presence of pockets of the 3rd Battalion, Luftlande Sturmregiment, which were still active and intent on making a nuisance of themselves, all tended to pin the defenders to their positions, disrupting the flow of information and orders and rendering swift, decisive action practically impossible.

The Royal Navy intercepts the German convoys

At sea, the continued presence of a large number of Royal Navy ships had, until the 'Ultra' revelations, seemed inexplicable in the face of complete Luftwaffe air superiority, but it is now known that signals intelligence had warned the British that the initial force from the 5th Gebirgs Division (3rd Battalion, 100th Gebirgsjäger Regiment) were on their way to reinforce the Fallschirmjäger. The convoy had left Piraeus harbour on 19 May and had reached the island of Milos the next day where they rested. It left Milos the following day as the second group left Piraeus. At around 23.00hrs it was located by a Royal Navy force of three cruisers and four destroyers just as it rounded Cape Spatha, which, despite the valiant efforts of an Italian destroyer, sank the majority of the convoy with heavy casualties in an engagement that lasted some two and a half hours. The 3rd Battalion ceased to be an effective fighting force with around 250 survivors being picked up from the water, although a single transport managed to make it to Cape Spatha with three officers and 110 men. The following day at around dawn, another Royal Navy force (four cruisers and three destroyers) located the second convoy, but that managed to retreat while the Luftwaffe distracted the British ships who had to withdraw under the increasing pressure of German air attack. The Luftwaffe then mounted a major offensive against any British ships that could be found and sank two cruisers and four destroyers, as well as damaging three more ships.

Allied counter-attack at Maleme, 21–22 May

Starting to recognize the seriousness of the situation at Maleme, Freyberg decided to launch a major night attack to drive the Germans from the airfield. Still worried about a seaborne invasion, however, he failed to quickly commit the two available New Zealand battalions (18th and 20th). Instead, he attempted to move the remaining Australian battalion from around Georgioupolis to relieve the 20th that would then move forward to reinforce the 28th, a somewhat convoluted move given the need for swift action. This was despite 2nd Lieutenant Cox, an officer on his staff and a journalist in civilian life, finding a faded operations order for the 3rd Fallschirmjäger Regiment amongst a bundle of captured German documents. The accuracy with which it detailed the German analysis of how the fighting would unfold left no doubt as to whether the document was genuine or not. Indeed, it outlined very clearly the need to seize the airfields as quickly as possible and that there would be no attempt to land transports in open country.

The plan for the counter-attack had first been discussed by field telephone on the morning of 21 May as there were signs that the 3rd Fallschirmjäger Regiment were preparing to advance north to try to cut off both the 5th and 10th Brigades, a factor that had influenced

Some Fallschirmjäger, after leaping over a stone wall in their path, move quickly towards the nearest available cover. It is unlikely that troops in action would leap over a stone wall into an unknown area so it is possible that this is a posed shot. (B. L. Davis Collection)

the move of the 2/8 Australian Battalion to a position between the 'Royal Perivolians' and the 2nd Greek Regiment late on 20 May. Freyberg then called a conference at 'Creforce' HQ in the afternoon to ensure that everyone understood that the 2/7 Australian Battalion from Georgioupolis would replace the 20th New Zealand Battalion guarding the coast before the latter moved. The final decision on the operation was taken around 18.00hrs and it seems no one raised the issue that two battalions might be insufficient to oust an enemy that was being reinforced by transports landing every few minutes. Brigadier Vasey was somewhat taken aback by the decision to deploy his one remaining battalion westwards, as he had planned to use it to clear the road to Rethymnon and reinforce Campbell's forces there. Lieutenant Colonel T. G. Walker, CO of the 2/7, expressed his concerns over such a move in daylight, but they were dismissed by Brigadier Inglis. Freyberg thus turned the operation over to Brigadier Edward Puttick, who failed to concentrate additional forces to support Hargest. Despite their best efforts, the Australians arrived late due to delays in assembling their vehicles and the attentions of the Luftwaffe, and did not relieve the 20th New Zealand Battalion until after 23.30hrs. As a result, the 20th did not join the Maoris on the start line until almost 03.00hrs, with the result that the operation did not begin until 03.30hrs. The planned attack on Pyrgos and the airfield would not take place until daylight when the Luftwaffe was in a position to intervene.

The 20th New Zealand Battalion advanced westwards to the north of the coast road; Roy Farran's tanks drove along the road while the Maoris advanced to the south of the road; and the 21st New Zealand Battalion tried to advance towards Hill 107 from the south-east. The

New Zealanders ran into the remnants of the 3rd Battalion that were hiding in the rough ground to the east of the airfield with the survivors of the drops the day before and so the attack started to bog down, with a series of house-clearing actions. The Maoris encountered less opposition to begin with but then encountered some strong defensive positions and also came to a halt amid fighting in and around the German strongpoint in Pyrgos. Farran's tanks managed to advance to the edge of the town, but one was knocked out by a captured Bofors while another halted with mechanical failure. The first company to reach the airfield was D Company of the 20th Battalion, by then under Lieutenant Maxwell, which found the German defenders under Oberst Ramcke ready and waiting for them, and so decided to withdraw despite the gradual arrival of the rest of the battalion. The 21st New Zealand Battalion, on the southern flank, managed to make some headway against the German mountain troops but, after reaching a position near Vlaheronitissa, could not continue unsupported. The counter-attack had failed, with the New Zealanders exhausting themselves in the process.

The German advance from Maleme

By this time on the afternoon of 22 May, the Germans were rapidly reinforcing their troops on Crete with the 5th Gebirgs Division, despite the continued artillery fire targeted on the airfield. Transports were landing at a rate of 20 per hour and two fresh Gebirgsjäger battalions arrived that afternoon. The 5th New Zealand Brigade therefore pulled back from its forward positions at Pyrgos, barely a mile from Maleme, covered by a company of Maoris under Major H. G. Dyer. Generalmajor Julius Ringel arrived, and from this point on the Gebirgsjäger assumed responsibility for a greater proportion of the fighting. Ringel divided the German forces at Maleme into three Kampfgruppe (battlegroups) – the 95th Gebirgs Pioneer Battalion under Major Schätte was to defend Maleme and gradually push westwards to capture Kastelli. The reconstituted Luftlande Sturmregiment, now known as Kampfgruppe 'Ramcke', was to advance to the sea and then push eastwards along the coast, while two battalions (1st and 2nd) of the 100th Gebirgsjäger Regiment and a battalion (1st) from the 85th Gebirgsjäger Regiment, under the command of Oberst Willibald Utz, were to trek eastwards over the mountains in the hope of outflanking the Allied positions.

This plan was put into operation the next day, 23 May. The paratroopers under Ramcke advanced slowly eastwards out of the village of Pyrgos, discovering the remnants of Scherber's 3rd Battalion, and the reinforcements dropped on 21 May. Forward elements managed to reach Platanias bridge by 11.00hrs and set up defensive positions. They were subjected to a counter-attack from elements of D Company, 28th (Maori) Battalion, under Captain F. Baker, but successfully held their line. The Gebirgsjäger under Oberst Utz moved into the mountains but by the afternoon had been stopped at the village of Modi, where the New Zealanders had established a blocking position. Fierce fighting erupted around the Modi position and the New Zealanders were forced to pull back as elements of the Gebirgsjäger outflanked them. This meant that the covering artillery had to withdraw to a more secure position and so Maleme airfield was finally free of Allied artillery fire. Heidrich sent a fighting patrol out northwards in the early hours under Major Heilmann to make contact with the advancing mountain troops. The detachment took the village of Stalos at dawn and despite a counter-attack by a company from the Composite Battalion and B Company, 18th Battalion, managed to retain possession of the village.

The German advance was also hindered by elements of the 8th Greek Regiment and by Cretan irregulars. They successfully held up both the main advance by the mountain troops and the motorcycle-mounted 95th Reconnaissance Battalion. The latter was heading for Paleochora on the south coast to prevent the Allies landing reinforcements there. The Greeks and Cretan irregulars were so successful that they may well have played a decisive part in preventing a substantial part of the New Zealand Division from being surrounded. In its advance towards Kastelli, the 95th Gebirgs Pioneer Battalion under Schätte came up against fierce but uncoordinated resistance from both the 1st Greek Regiment and armed civilians including women and children.

For many Germans there was an added horror in fighting the Cretans, as they believed that the locals had no qualms about mutilating German dead or wounded that fell into their hands. Although the Germans eventually announced they would execute ten Cretans for every mutilated German they found, it had little apparent effect. Student's intelligence officer, Major Johannes Bock, led a military commission that concluded that many of the apparent mutilations were a result either of the particular type of combat encountered on Crete or of the post mortem attentions of birds or animals.

The Pioneer Battalion, along with the survivors of Mürbe's detachment that had been captured after they had dropped outside Kastelli, finally captured the town on 25 May. Continued Cretan resistance meant it was not until 27 May that it could be used to land tanks.

By 24 May, the Germans were being reinforced on a huge scale and their supply state was such that they could begin to adopt conventional tactics, supported by tactical airpower and their own artillery. The fact that the Germans had transported artillery onto the island came as a great surprise to the Allies. This was unheard of in 1941, with artillery considered far too cumbersome and heavy for airborne operations, but the Germans overcame this obstacle by deploying one of Europe's first recoilless guns.

The first very basic recoilless gun had been invented by an American naval officer, Commander Davis, during World War I. Davis reasoned that if two guns were placed back to back and fired simultaneously, the recoil from both would cancel each other out. He made a gun with a single central chamber and two barrels facing in opposite directions. One barrel carried an explosive projectile, the other an equivalent weight of grease and lead shot. When the central cartridge was exploded the two projectiles were sent down their barrels at identical speeds making the entire mechanism free from recoil. The explosive shell went to its target while the wad of grease and shot disintegrated in the air. The Davis gun was purchased by the British, who undertook experiments to see if it could be used as an anti-submarine weapon, but the war ended before the trials were completed. A German company, Rheinmetall, continued to experiment with the idea and eventually reduced it to a much simpler form. Reasoning that recoil could still be counterbalanced if the ejected 'countershot' were smaller but faster, they found that the shell could be counterbalanced by a stream of gas moving at very high speed through a nozzle in the gun breech. The LG40 was a 75mm calibre gun, weighing 320lb (145kg), which fired a 13lb (6kg) high explosive shell to a range of about 4 miles. The German Army's conventional 75mm gun weighed 2,470lb (1,120kg) and fired the same shell to a range of nearly 6 miles. Thus the recoilless rifle allowed virtually the same firepower as a conventional artillery piece, with two-thirds the range but one-eighth of the weight.

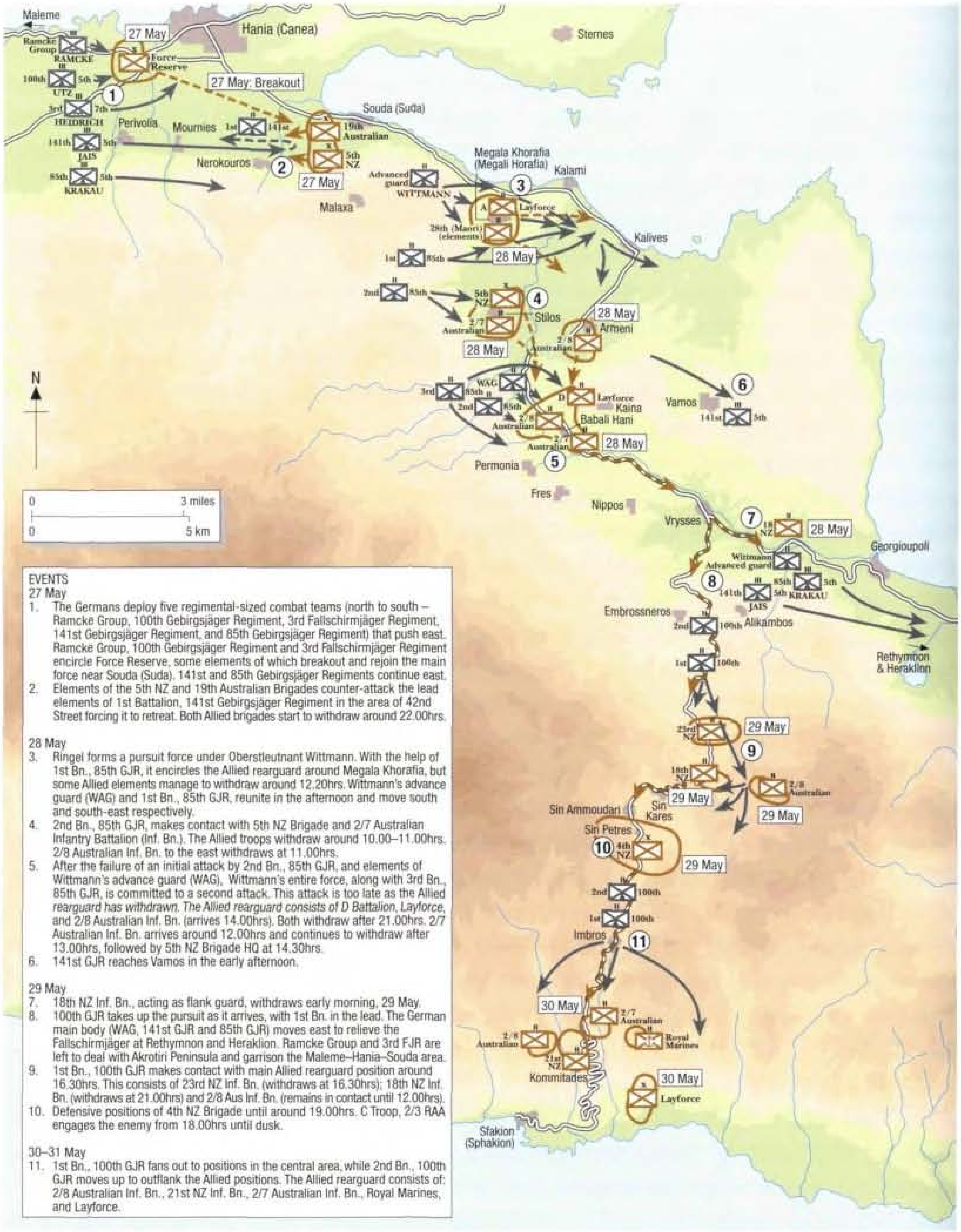
Galatos falls

By the end of 24 May, the German formations heading east from Maleme had finally united with Heidrich's men to form a cohesive front to the west of the Allied lines. These had moved again late on 23 May. Puttick was aware of the threat to the Allied right flank from the advancing German mountain troops. As a result, 5th New Zealand Brigade had again withdrawn eastwards, this time into divisional reserve, and the 10th New Zealand Brigade took over responsibility for the front line. Kampfgruppe 'Ramcke', 100th Gebirgsjäger Regiment, and the 3rd Fallschirmjäger Regiment faced them in a line running inland roughly south-east from the coast. Now the Germans had reached the New Zealand blocking position at Galatos, and they started a series of aggressive probing attacks, particularly against the Composite Battalion and Russell Force (the amalgamated New Zealand Divisional Cavalry and Petrol Company under Major J. Russell).

This led to a general attack on 25 May, with pressure quickly building in the late afternoon from the south and west. It was the 18th New Zealand Battalion that had to give way first; the right-hand company was overrun by Ramcke's men at around 18.00hrs, despite a gallant counter-attack led by Lieutenant Colonel Gray. After some bitter fighting, the Composite Battalion disintegrated as well, with troops streaming down the road towards Hania. A German breakthrough was only narrowly averted by inserting part of the 20th Battalion, which had moved forward on orders from Inglis. The collapse spread down the line from Wheat Hill, however, and soon the entire 18th Battalion was withdrawing, although Russell Force remained in its positions, partially cut off. After the New Zealanders had been ejected from Galatos by the Germans, Kippenberger attempted to rally as many troops as he could for a counter-attack, including two companies from the 23rd New Zealand Battalion, the 4th New Zealand Brigade band, some Pioneers and the Kiwi Concert Party. These were joined by Captain Michael Forrester and Lieutenant Roy Farran with two light tanks. Following an initial reconnaissance by the two light tanks, this most composite of composite forces charged into Galatos, and after some bitter fighting, successfully evicted the Germans, enabling the survivors of Russell Force to withdraw. Their mission accomplished, the New Zealanders withdrew during the night under orders from Kippenberger, allowing the Gebirgsjäger to occupy the village and open the way for an advance on Hania. That night, a very tired Kippenberger made his way to the 4th New Zealand Brigade command post, where the remaining battalion commanders had already arrived. Inglis raised the question of counter-attacking again, and Lieutenant Colonel Dittmer volunteered his 28th (Maori) Battalion. After a general discussion, it was decided that the time had passed, and that the only course would be to withdraw to a position adjoining Brigadier Vasey's 19th Australian Brigade. Even though nobody dared speak of it openly, it looked as though their ultimate fate would once again be in the hands of the Royal Navy.

The new line just west of Hania held on 26 May, aided by the Luftwaffe's accidental bombing of a battalion of the 85th Gebirgsjäger Regiment. This shook German morale and induced an understandable caution in their advance. The battalion in question had been pressing east in the foothills near Perivolia towards the area held by the 2nd Greek

Regiment, which was beginning to dissolve. North of the Greeks was the 19th Australian Brigade, once again consisting of the 2/7 and 2/8 Infantry Battalions. From here north to the coast were three New Zealand battalions, reduced in strength and semi-amalgamated. Holding the German advance here would allow the Royal Navy to offload essential stores that night, as well as allowing the main body of Layforce (two battalions of commandos) to land, commanded by Colonel Robert Laycock. This force had discovered that, despite assurances in Alexandria that the battle was going well, the reality was very different.


Maleme
Hania (Canea)
27 May
Ramcke Group
RAMCKE
100th
5th
UTZ
3rd
7th
HEIDRICH
Perivolia
Force Reserve
27 May: Breakout
Mournies
1st
141st
141st
5th
JAIS
85th
5th
KRAKAU
Nerokouros
19th Australian
5th NZ
Souda (Suda)
Sternes
Malaxa
Advanced guard
WITTMANN
Megala Khorafia (Megali Horafia)
Kalami
A
Layforce
28th (Maori) (elements)
Kalives
1st
85th
28 May
2nd
85th
5th NZ
2/7 Australian
Stilos
28 May
Armeni
2/8 Australian
N
3rd
WAG
85th
2nd
85th
D
Layforce
Kaina
Babali Hani
2/8 Australian
2/7 Australian
Vamos
141st
5th
Permonia
Fres
Nippos
Vrysses
18 NZ
Georgioupoli
Wittmann Advanced guard
85th
5th
141st
5th KRAKAU
JAIS
Embrossneros
2nd
100th
Alikambos
1st
100th
Rethymnon & Heraklion
23rd NZ
29 May
18th NZ
2/8 Australian
29 May
29 May
Sin Ammoudari
Sin Kares
Sin Petres
4th NZ
29 May
2nd
100th
1st
100th
Imbros
30 May
2/7 Australian
Royal Marines
2/8 Australian
21st NZ
Kommitades
30 May
Layforce
Sfakion (Sphakion)
1
2
3
4
5
6
7
8
9
10
11
0
3 miles
0
5 km

EVENTS
27 May
1. The Germans deploy five regimental-sized combat teams (north to south – Ramcke Group, 100th Gebirgsjäger Regiment, 3rd Fallschirmjäger Regiment, 141st Gebirgsjäger Regiment, and 85th Gebirgsjäger Regiment) that push east. Ramcke Group, 100th Gebirgsjäger Regiment and 3rd Fallschirmjäger Regiment encircle Force Reserve, some elements of which breakout and rejoin the main force near Souda (Suda). 141st and 85th Gebirgsjäger Regiments continue east.
2. Elements of the 5th NZ and 19th Australian Brigades counter-attack the lead elements of 1st Battalion, 141st Gebirgsjäger Regiment in the area of 42nd Street forcing it to retreat. Both Allied brigades start to withdraw around 22.00hrs.

28 May
3. Ringel forms a pursuit force under Oberstleutnant Wittmann. With the help of 1st Bn., 85th GJR, it encircles the Allied rearguard around Megala Khorafia, but some Allied elements manage to withdraw around 12.20hrs. Wittmann's advance guard (WAG) and 1st Bn., 85th GJR, reunite in the afternoon and move south and south-east respectively.
4. 2nd Bn., 85th GJR, makes contact with 5th NZ Brigade and 2/7 Australian Infantry Battalion (Inf. Bn.). The Allied troops withdraw around 10.00–11.00hrs. 2/8 Australian Inf. Bn. to the east withdraws at 11.00hrs.
5. After the failure of an initial attack by 2nd Bn., 85th GJR, and elements of Wittmann's advance guard (WAG), Wittmann's entire force, along with 3rd Bn., 85th GJR, is committed to a second attack. This attack is too late as the Allied *rearguard has withdrawn. The Allied rearguard consists of D Battalion, Layforce,* and 2/8 Australian Inf. Bn. (arrives 14.00hrs). Both withdraw after 21.00hrs. 2/7 Australian Inf. Bn. arrives around 12.00hrs and continues to withdraw after 13.00hrs, followed by 5th NZ Brigade HQ at 14.30hrs.
6. 141st GJR reaches Vamos in the early afternoon.

29 May
7. 18th NZ Inf. Bn., acting as flank guard, withdraws early morning, 29 May.
8. 100th GJR takes up the pursuit as it arrives, with 1st Bn. in the lead. The German main body (WAG, 141st GJR and 85th GJR) moves east to relieve the Fallschirmjäger at Rethymnon and Heraklion. Ramcke Group and 3rd FJR are left to deal with Akrotiri Peninsula and garrison the Maleme–Hania–Souda area.
9. 1st Bn., 100th GJR makes contact with main Allied rearguard position around 16.30hrs. This consists of 23rd NZ Inf. Bn. (withdraws at 16.30hrs); 18th NZ Inf. Bn. (withdraws at 21.00hrs) and 2/8 Aus Inf. Bn. (remains in contact until 12.00hrs).
10. Defensive positions of 4th NZ Brigade until around 19.00hrs. C Troop, 2/3 RAA engages the enemy from 18.00hrs until dusk.

30–31 May
11. 1st Bn., 100th GJR fans out to positions in the central area, while 2nd Bn., 100th GJR moves up to outflank the Allied positions. The Allied rearguard consists of: 2/8 Australian Inf. Bn., 21st NZ Inf. Bn., 2/7 Australian Inf. Bn., Royal Marines, and Layforce.

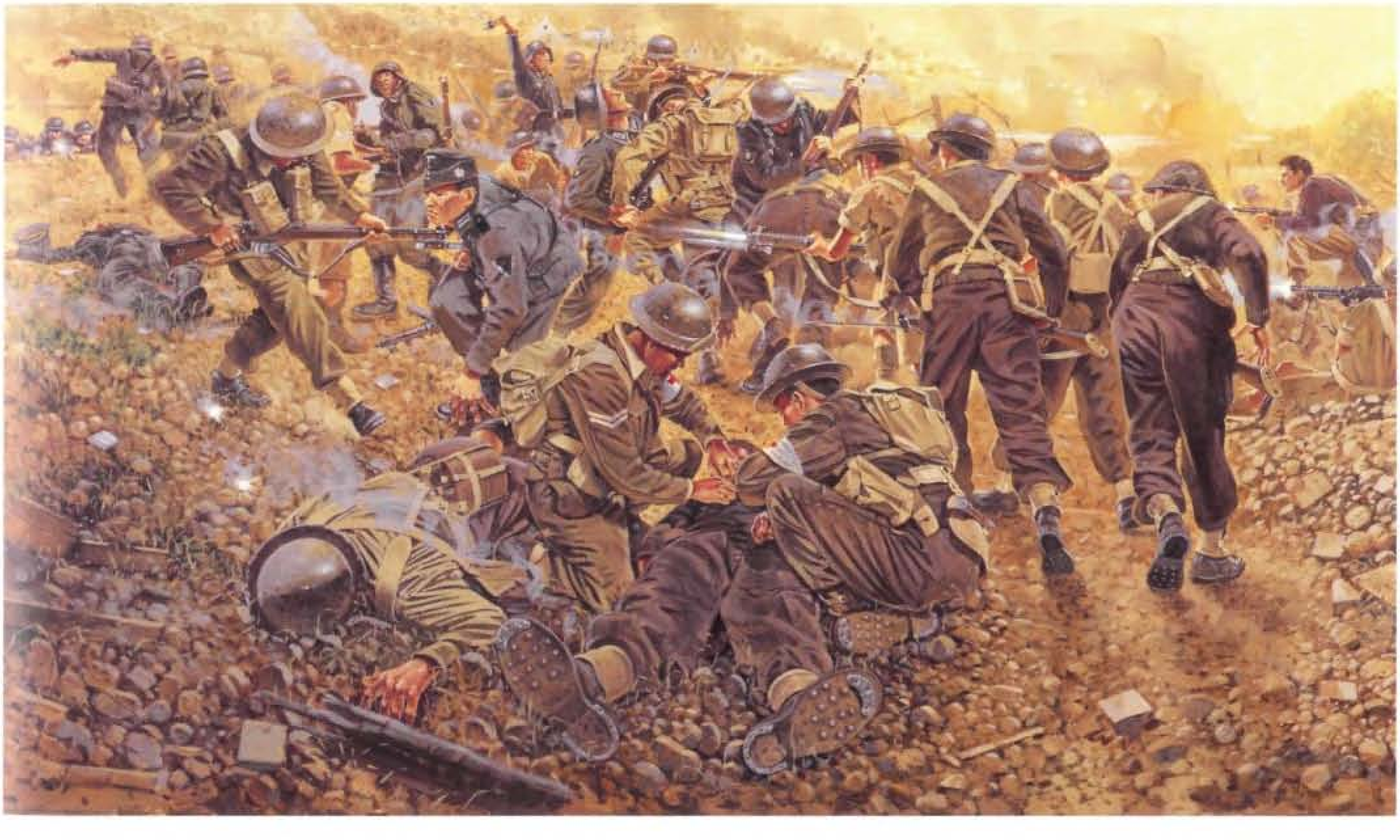
The German advance and Allied retreat, Hania to Sphakion, 27–31 May.

The destruction of Force Reserve

Meanwhile, despite Force Reserve (the Welch Regiment, Northumberland Hussars and the Rangers) being placed under Inglis' command, General Weston gave orders that Force Reserve was to advance westwards and replace the exhausted 5th New Zealand Brigade just west of Hania. He failed, however, to give the New Zealanders orders to withdraw when replaced. Nor does he seem to have been aware that the Australians had by then been outflanked and were under pressure to withdraw. No one seemed to know which units were under the command of which headquarters. Puttick and Hargest were becoming frustrated by a lack of orders and Freyberg was away from his command post, visiting the dockside at Souda. Puttick countermanded Freyberg's order that the Australians should stand fast come what may, ordering both Hargest and Vasey to retreat to a new line along what was now known as '42nd Street' while they still had the cover of darkness. He did not realize that Force Reserve was already moving westwards and would now be advancing unsupported against a superior enemy force.

The Germans continued their advance, and on 27 May Freyberg took the decision to inform Wavell that, in his opinion, defeat was now inevitable and arrangements should be made to evacuate the Allied forces from Crete. The garrison made preparations to withdraw. During the early hours of the morning, Force Reserve, which had passed through an eerily quiet and deserted Hania, fanned out to the west sending patrols to establish contact with the Royal Perivolians to the south. They discovered that both the Perivolians and the Australians had pulled out. Soon after dawn, Force Reserve heard sounds of fighting well to their rear on the road to Souda. The implication was clear enough.

Australian counter-attack against 1st Battalion, 141st Gebirgsjäger Regiment, morning 27 May 1941. As the Germans advanced, a fierce fire-fight broke out, and elements of both 5th New Zealand Brigade and 19th Australian Brigade spontaneously launched a bayonet charge that initiated a round of hand-to-hand combat. The Allied troops advanced into the 1st Battalion, who held on before turning back, leaving their dead and wounded alongside Allied casualties. (Howard Gerrard © Osprey Publishing Ltd)



At this point, the Germans had formed five regimental battlegroups in a line facing the Allies. These were, from north to south, Kampfgruppe 'Ramcke' nearest the coast, 100th Gebirgsjäger Regiment, 3rd Fallschirmjäger Regiment, 141st Gebirgsjäger Regiment and 85th Gebirgsjäger Regiment. The German attack started at 08.30hrs with mortars, artillery fire and machine-guns. It soon became clear that Force Reserve had been cut off, with Ramcke's men and the 100th Gebirgsjäger Regiment attacking from the west, while the 3rd Fallschirmjäger Regiment encircled them from the south and the 141st and 85th Gebirgsjäger Regiments continued to advance east towards Souda. Around 250 officers and men managed to fight their way out and make it back to the Allied main force in small groups, but the majority were encircled, to be killed or taken prisoner, the last resistance ending on the morning of 28 May. This was a tragic waste of almost 1,000 fresh troops. The squabbling after the battle over who was to blame is reminiscent of the arguments after the Charge of the Light Brigade. Puttick blamed Weston; Weston thought Puttick's countermanding of Freyberg's orders cavalier in the extreme; and Freyberg thought that Inglis had evaded his responsibility to command Force Reserve. Whatever the reason, unclear and badly thought-out orders, poor communications and complicated alterations to the chain of command had invited disaster.

Ringel failed to realize that the Allied forces had withdrawn and thought they were still in position just to the west of Hania, a picture reinforced by the arrival of Force Reserve. The 141st Gebirgsjäger Regiment therefore continued its advance in a southerly arc with the 85th on its right flank, in the hope of encircling a substantial number of Allied troops by cutting the Hania–Souda road. However, the 1st Battalion, at the forefront of the advance, came up against the Australian and New Zealand positions at the 42nd Street line at around 11.00hrs. A spontaneous counter-attack started, taking the Germans by surprise, and 1st Battalion, 141st Gebirgsjäger Regiment, was badly mauled but managed to retreat to a position supported by the 3rd Battalion. Both the 141st and 85th Gebirgsjäger Regiments paused, surprised at this reverse. By standing firm, the 5th New Zealand and 19th Australian Brigades had managed to buy time for the retreat to get under way.

The Allied retreat to Sphakion

That afternoon, nearly 30 hours after he had originally outlined that defeat was now inevitable, Freyberg received confirmation from Wavell to go ahead with his plan to withdraw south over the mountains to Sphakion. Wavell initially wanted Freyberg to withdraw east to link up with the garrisons at Rethymnon and Heraklion. Freyberg suspected that was what Ringel was expecting him to do, however, and Wavell was forced to agree. That evening, 'Creforce' HQ set off by car and truck over the mountain road to Sphakion.

After Freyberg's departure to Sphakion, Weston was left in command, but his unreliable leadership, not helped by false rumours and bad communications, prompted Vasey and Hargest to formulate their own plans. They withdrew their respective brigades and made a dash for Stilos, to the south-east of Souda on the route to Sphakion. They made it only just in time, as at daybreak on 28 May the 85th Gebirgsjäger Regiment, having renewed its advance some hours earlier and crossed the mountains to cut the Hania–Rethymnon road, ran into the hasty blocking position manned by the 5th New Zealand Brigade, as well as the 2/7 Australian Battalion. The battle raged back and forth but a small Gebirgsjäger force managed to outflank the New Zealand position. The tactics of the Gebirgsjäger consisted of advancing to contact, and once the enemy position had been identified, machine-gun and mortar units were sent off to climb prominent features on either flank. This sort of movement took time, but followed Ringel's maxim of 'sweat saves blood'. Artillery and mortars were brought forward to support the renewed attack, which eventually forced the New Zealanders to disengage and retreat south.

Also on 28 May, another battlegroup, Kampfgruppe 'Wittmann', also known as the Wittmann Advanced Guard (consisting of the 95th Motorcycle Battalion, 95th Reconnaissance Unit, part of the 95th Anti-tank Battalion and some motorized artillery and engineer units) was spearheading the main German advance east. This force was sent along the coast road towards Heraklion to relieve the pockets of Fallschirmjäger that had held out all this time, a number having been reinforced by the drops on 21 and 24 May. Once it reached Heraklion itself it would combine with the Fallschirmjäger and capture the airfield. Kampfgruppe 'Wittmann' managed to advance some three miles beyond Souda but was stopped near Megala Khorafia by a party from A Battalion of Layforce (consisting of Spanish Republicans) and some Maoris from the 28th Battalion. The Allied troops were soon forced to retreat to Babali Hani, where the remainder of A Battalion was trying to form another stop line. The other battalion (D Battalion), which had stayed behind near Souda to delay the enemy, had suffered heavy casualties after two confused engagements, and was in a state of disarray.

The 1st Battalion, 85th Gebirgsjäger Regiment, continued to move parallel with Kampfgruppe 'Wittmann', while the 2nd Battalion made contact with the Allied blocking position around Stilos. However, the two commando battalions had to be amalgamated after the commander of D Battalion virtually suffered a nervous breakdown. Together with the 2/8 Australian Battalion, which had retreated from Armeni with the approach of the 1st Battalion, 85th Gebirgsjäger Regiment, and two Matilda tanks that had arrived from Heraklion, they managed to hold up Kampfgruppe 'Wittmann' and the 2nd and 3rd Battalions of the 85th Gebirgsjäger Regiment around Babali Hani. The Germans eventually forced them to withdraw by flanking the position to the west, after the tanks ran out of fuel.

The evacuation of Heraklion

Soon after dawn on the 28th, the battalion commanders around Heraklion were summoned to Brigadier Chappel's headquarters. There they learned that the battle to the west had turned for the worst and that a Royal Navy squadron would evacuate them from the harbour that night. Secrecy had to be preserved at all costs, and although battalion order groups were held at midday, the men were not told until the last moment. For Lieutenant Colonel Pitcairn of the Black Watch, the news that morning was particularly bitter, as one of his most popular company commanders, Major Alistair Hamilton, who had promised that 'the Black Watch leaves Crete when the snow leaves Mount Ida', had been killed by a mortar bomb. The feeling in the 14th Infantry Brigade was that the 'other end' had let the side down and that they would be letting down the Cretans who had fought with such bravery. When the men were told at 20.00hrs that evening, many were stunned into silence. To them, the battle had been going well up to that point. There was little time to prepare for the withdrawal, and so a great deal of equipment was destroyed or made unusable including cars, trucks, field guns and signals equipment, while ammunition and petrol stores were booby trapped or buried. A lot of small arms and ammunition were handed over to the Cretans, however, so they could continue their resistance.

The withdrawal was handled perfectly, thanks to the experience of the NCOs in the regular battalions. Oberst Bräuer's paratroopers had no idea what was happening, and at 21.30hrs the Allied troops began to withdraw towards the harbour. At 23.30hrs the ships of Admiral Rawling's force reached Heraklion, but contained only two cruisers, HMS *Ajax* having turned back to Alexandria after suffering damage during an air attack. *Orion* and *Dido* remained offshore while the destroyers ferried the Allied troops over to them in pairs. When the cruisers had embarked over 1,000 men each, the destroyers then returned for their passengers. All 3,486 men who had assembled were embarked, by the deadline of 02.45hrs. About an hour and a half after the squadron had set sail, HMS *Imperial*'s steering jammed and HMS *Hotspur* was sent back to pick up her crew and passengers, after which she sank *Imperial* with torpedoes. Unfortunately, this led to a delay as the force waited for *Hotspur* to catch up and was thus still short of the Kaso Strait and the island of Skarpanto with its enemy airfield. When the sun finally rose at around 06.00hrs, the first wave of attackers was spotted against the dawn sky. The attacks continued for some six hours. *Hereward* was hit first and tried to beach on Crete. The *Orion* was attacked twice and received two direct hits and several near misses. Two bombs

Members of the 19th New Zealand Battalion on board a destroyer during their evacuation from Crete, 1 June 1941. The 19th had started out with 565 personnel, but by the time of their evacuation were down to some 213. The 19th were to go on to serve in the rest of the North African campaign as part of the New Zealand Division, including taking part in Operation Crusader. *(Alexander Turnbull Library, DA-10655)*

penetrated three decks and caused devastation where the 1,000 soldiers were sheltering. Some 260 men were killed and a similar number wounded. The NCOs who had volunteered to man Bren guns to help with the anti-aircraft defence had made a fortunate choice. *Dido* was also hit twice, with one bomb destroying a gun turret, while the other penetrated the deck, exploding near a canteen packed with soldiers. Over 100 men were killed, either by the blast, by the resultant fire or by drowning when water had to be pumped in to stop the fire spreading to the magazine.

Some men were left behind, such as those in standing patrols or the wounded in Knossos Military Hospital, and those that could joined up with the rear party of Argylls on the south coast. Heraklion was finally occupied on 29 May after German patrols found little resistance.

The fall of Rethymnon

At Rethymnon, Lieutenant Colonel Campbell and his garrison had little knowledge of what was happening on the rest of the island, although a landing craft that had been sent from Souda arrived during the early morning of 28 May. Lieutenant Haig, who commanded it, had not brought Freyberg's instructions for evacuation with him, due to the confusion at Souda and 'Creforce' HQ on the night Layforce had landed. All Haig could tell Campbell was that he was to head for Sphakion on the south coast. Campbell, a regular officer conscious of his responsibility, did not want to abandon his mission to hold the airfield at Rethymnon until he was officially relieved of it. Unfortunately, the two tanks supporting the garrison had been destroyed in an attack on the German strongpoints around Perivolia. Campbell had had to admit there was little chance of clearing the coast road to move westwards and an attack towards Souda was abandoned. Campbell therefore continued with his mission to deny the enemy the use of the airfield as ordered.

Ringel had in fact ordered the bulk of his force to advance to Rethymnon to relieve the beleaguered paratroopers there and then to continue to Heraklion. This force was led by Kampfgruppe 'Wittmann', to be joined eventually by tanks of the 31st Panzer Regiment that had finally landed at Kastelli. After the action around Spilia, they had continued eastward, supported by the 141st and 85th Gebirgsjäger Regiments, entering Rethymnon on 29 May. No further advance was considered possible until armoured cars and artillery were brought up, as the Australians still held positions in the mountains to the south.

That night, Australian soldiers took turns to flash the morse code letter 'A' out to sea in case Royal Navy ships were coming to pick them up. The next day saw the arrival of the German heavy artillery and the start of the bombardment of the Allied positions on the heights surrounding Rethymnon. The German advance from Rethymnon towards the airfield also continued. Campbell, still holding the airfield with his 2/1 Australian Battalion, conferred by field telephone with Major R. L. Sandover, commanding the 2/11 Australian Battalion. Campbell saw little point in continuing hostilities that would lead to futile casualties, especially as food and ammunition were in short supply, and so had decided to surrender. Sandover agreed with the futility of continuing to resist but wanted to give every man who wanted to, a chance to escape over the hills. The two officers agreed to differ and went their separate ways. Campbell went into captivity with 700 troops. Sandover, with 13 other officers and 39 NCOs and men, finally managed to escape to Egypt by submarine after spending several months in the mountains.

Kampfgruppe 'Wittmann' moved off once again and made contact with a group of Fallschirmjäger from the 2nd Fallschirmjäger Regiment at 09.00hrs, and then at midday with a patrol from the 1st Fallschirmjäger Regiment who had been dug in near Heraklion. The battlegroup then took possession of the airfield where it was joined by a small Italian force that had been landed at Sitia the previous day. It then advanced to the village of Lerapetra on the south coast at 22.00hrs. They encountered few Allied troops, because the main evacuation was in fact taking place further west along the south coast at Sphakion. Allied forces were actually withdrawing to the south and not the east as the Germans had originally assumed. Once they had discovered that the Allied forces were nowhere in sight in the eastern half of the island, the Germans immediately began moving south on 29 May. Those German troops to the east moved south on 30 May.

The evacuation from Sphakion

On the night of the evacuation from Heraklion, the Royal Navy took off the first 1,000 Allied troops from Sphakion in four destroyers. Meanwhile, the Allied main force continued on its trek south, covered in turn by 19th Australian Brigade and the 5th New Zealand Brigade. The troops, weary and thirsty, trudged up the mountain road from

A wounded Allied soldier, possibly from the 28th (Maori) Battalion, disembarks at Alexandria from a destroyer after the Crete campaign, 1 June 1941. (Alexander Turnbull Library, DA-01618)

Vrysses encountering one ridge after another, but were finally greeted by the sight of the Askifou Plain, a fertile, flat-bottomed valley of fields, meadows and small orchards. By this point, the German advance was led by the two battalions of the 100th Gebirgsjäger Regiment. It was halted by a determined rearguard action by the two Australian battalions under Vasey, the 23rd New Zealand Battalion and the last three light tanks of the Hussars. The action at Babali Hani had made the Germans wary of taking risks, but with the end now in sight the mountain troops had adopted a somewhat light-hearted approach. Many had discarded their winter jackets and trousers, wearing odd items of British tropical clothing, which occasionally caused confusion. A somewhat bizarre situation occurred when the Germans took the village of Askifou and raided the richest house in the village, owned by a newly married couple. The Gebirgsjäger proceeded to wear the new wife's embroidered knickers and petticoats on their heads, to act as improvised protection from the baking sun. They looked more like a chorus line in a regimental concert troop than front-line soldiers.

At the southern end of the Askifou Plain lay the Imbros Pass, which offered a reasonably safe descent to the coast. The road continued for a few more kilometres and then came to a sudden stop on a massive bluff overlooking the sea. The last precipitous stretch of road lay along what was little more than a goat track winding down the rock face. Abandoned vehicles lay all around, a testament to the failure of the military authorities to finish the road.

'Creforce' HQ had been established in a cave in the rock face below the road. Puttick arrived at the cave at last light on 29 May, having been summoned by Freyberg who told him to leave the island, as Weston's command of the rearguard made a divisional staff redundant. He saluted Freyberg and said, 'We did our best. We did all we could.' The night of 29 May saw the largest evacuation, with Admiral King arriving in HMS *Phoebe*, with the cruisers *Perth*, *Calcutta* and *Coventry*, three destroyers and the commando troopship HMS *Glengyle*, whose landing craft proved to be a godsend. Over 6,000 men were evacuated.

The German advance continued on 30 May as the rearguard withdrew but was checked again at the Imbros Pass. The Germans kept up the pressure, however, and by the evening of 30 May were less than 3 miles from Sphakion with the remainder of the island totally in German hands. The 5th New Zealand Brigade descended the escarpment that morning and Hargest, who had shown more determination and sound judgement during the retreat than during the battle, was appalled at the state of the troops that were still there. Half-starved and thirsty base personnel several thousand strong were still encamped in the rows of caves near the beach. As priority in the evacuation went to formed bodies of front-line troops, many tried to beg and implore their way onto the ships, but the New Zealanders had set up a cordon armed with bayonets and sub-machine-guns to enforce order. Two destroyers had been forced to turn back that night, so only 1,500 men were taken off. At dawn on 31 May, Admiral King left Alexandria once again with the cruisers *Phoebe* and *Abdiel*, along with two destroyers. After meeting with Wavell, Cunningham decided to risk another sortie to Crete, even though the Mediterranean fleet had been badly mauled by operations around the island. 'It takes the Navy three years to build a new ship,' he had declared. 'It will take three hundred years to build a new tradition. The evacuation will continue.' A favourite toast in the wardrooms of the Mediterranean fleet for a long time to come was 'To the three Services, the Royal Navy, the Royal Advertising Federation and the Evacuees'. In their last effort Admiral King's force left Sphakion at 03.00hrs on the morning of 1 June with nearly 4,000 men. They arrived safely, but the anti-aircraft cruiser HMS *Calcutta* was sunk within 100 miles of Alexandria. Major General Freyberg left Crete on 30 May by flying boat. The remaining Allied troops were ordered to surrender at 09.00hrs on 1 June, the surrender being delivered by Lieutenant Colonel Theo Walker to an Austrian officer in the 100th Gebirgsjäger Regiment at Kommitades, leaving the Germans in control of the island.

Aftermath

The battle for Crete was a German victory but a costly one. Out of an assault force of just over 22,000 men, the Germans suffered almost 6,500 casualties, of which 3,352 were killed or missing in action. Almost a third of the Ju 52s used in the operation were damaged or destroyed. The British and Commonwealth forces suffered almost 3,500 casualties (of which just over 1,700 were killed) and almost 12,000 were taken prisoner (including Lieutenant Colonel Walker's 2/7 Australian Battalion), while the Greeks had approximately 10,000 men taken prisoner. The Royal Navy lost three cruisers and six destroyers sunk, and one aircraft carrier, two battleships, six cruisers and seven destroyers were badly damaged, with the loss of over 2,000 men. The RAF lost some 47 aircraft in the battle. Exactly how many Greek soldiers and Cretan civilians died during the fighting will never be known.

There were positive lessons to be learned from the battle, such as the importance of airpower in providing support to the ground troops and its impact on naval operations. Superior German leadership and initiative also contributed to the outcome. However, it is the failings by both sides that deserve most attention. The use of intelligence and the performance of command and control structures were the key to the evolution of the battle for both the Germans and Allies.

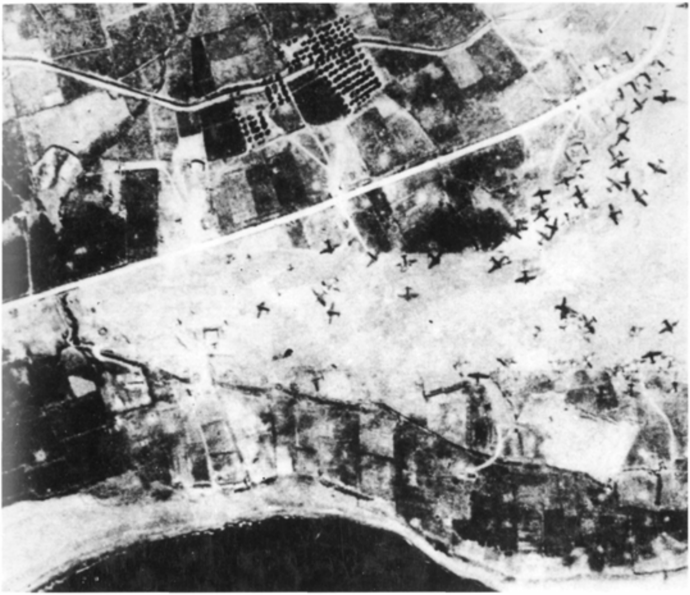
The German airborne forces were relatively well equipped but their operational planning was flawed due to poor intelligence. The lack of surprise resulted in high casualties and brought the operation perilously close to failure. Had it not been for the support of von Richthofen's Fliegerkorps VIII and the leadership and initiative qualities shown by the German officers, particularly the junior commanders, the battle would have been lost.

The numerically superior but poorly equipped Allied garrison lost the battle by only a slim margin, due to the fact that the key commanders involved failed to understand both the threat from and the vulnerabilities of an airborne force. They also missed the opportunity to launch an aggressive counter-attack. Throughout the battle, the Luftwaffe utilized its immense advantage in combat power to help restrict the impact made by the Royal Navy, support the beleaguered paratroopers, demoralize the defenders and interdict Allied troop movements. The casualty figures show a higher than usual killed-to-wounded ratio, a testament to the ferocity of the battle and how close the result was.

As a result of the huge losses suffered by the Fallschirmjäger in Crete, it was forbidden to mount any large-scale operations in the future, with Hitler telling Student on 19 July 1941 that the day of the paratrooper was over. Apart from a few small-scale operations, the paratroopers mainly served as elite infantry for the rest of the war. Crete was rightly dubbed the 'Graveyard of the Fallschirmjäger', with Student in 1952 admitting that 'For me, the battle of Crete ... carries bitter memories.'

The Gebirgsjäger who were drafted into the operation at the last moment performed admirably, as they did throughout the war. The fact that the operation was undertaken just three weeks after the fall of Greece is a testament to the flexibility, ingenuity and determination of the German armed forces who had to overcome immense logistical difficulties.

British operations on Crete were hampered by the poor shape many units found themselves in after the campaign in Greece. Indecision, misunderstanding, a lack of information (at least when the fighting started) and poor communications in the chain of command, both on Crete itself and from Crete to Egypt, also played a part. The order to Freyberg to preserve the airfields for the future use of the RAF also proved misguided. The importance and reliability of the 'Ultra' intercepts were not apparent to Freyberg as the exact source of the information was not revealed to him. As such he continued to focus primarily on the threat of an amphibious attack. There was no clear-cut plan of defence,



An aerial view of the damage visited on Maleme airfield, in a photograph taken during a bombing raid by the RAF. A number of Ju 52s can be seen as having been wrecked and lie scattered about the area. There is also evidence of shell impact craters just to the right of centre. (Alexander Turnbull Library, DA-02059-F) and what was undertaken was done so at the last minute. The defence of the island was improvised, and with the British at full stretch in the rest of North Africa and the Middle East, the men and matériel necessary for the defence of Crete could not be spared.

None of the senior commanders performed with distinction. The exception was Cunningham, who appreciated the impact of airpower on naval operations, the strategic consequences for the Allies of a British defeat at Crete, and the possibility of a shift in the naval balance of power in the Mediterranean. Generally, Allied commanders showed too little aggression and their appreciation of the situation always lagged behind events – something that did not hinder the Germans in the same way, as their commanders led from the front. There was also considerable political interference with Wavell's command from London, specifically from the Prime Minister, Winston Churchill.

In the wake of the final Allied evacuation of Crete on 1 June, and the subsequent surrender of the remaining Allied forces, the occupied island was divided into two zones. The main German zone covered the western provinces of Hania, Rethymnon and Heraklion, while the subsidiary Italian zone covered the provinces of Sitia and Lasithi in the east. The Italian occupation force consisted of the Siena Division, whose commander, Generale Angelo Carta, had his headquarters in Neapolis and ran his zone with a somewhat more liberal and relaxed attitude than many of his German counterparts. The German Garrison HQ was in Hania and its first commandant, General Waldemar Andrae, took over from Student and was in turn succeeded in 1942 by another paratrooper, Bruno Bräuer, former commander of the 1st Fallschirmjäger Regiment. In the spring of 1944, the hated Friedrich-Wilhelm Müller took control, and was to prove the most brutal of the garrison commanders, a reputation firmly established while in command of the 22nd Luftlande Division at Arhanes, south of Heraklion. The elite 22nd Luftlande Division had been sent to Crete in the summer of 1942 much to the annoyance of a number of senior German officers, who considered it a waste to use such a highly trained division in a garrison role. The garrison strength fluctuated wildly, depending on how the North African and Russian campaigns were progressing and the perception of the threat of invasion. It reached its zenith in 1943 with 75,000 and gradually declined to its lowest of 10,000 just before its surrender on 12 May 1945.

Undoubtedly, the hostile reaction of the Cretan population came as a shock to the Germans as they had expected a more welcoming attitude, the fiercely independent Cretans always having viewed the established Greek government with suspicion and distaste. To the Cretans, however, the Germans were just another invader whom they would fight to defend their homes, island and freedom. Beginning in the summer of 1941, they started to form centres of resistance. The initial aim was to gather as many of the British and Commonwealth troops remaining on the island as possible. The Cretan guerrillas took it upon themselves to protect, feed and clothe these Allied servicemen and, where possible, arrange their safe evacuation so they could carry on the fight elsewhere. For this they needed links with the main headquarters in Cairo and other parts of the Middle East. Over time an effective communications network was established to facilitate not only the evacuation of Allied servicemen, but also the introduction of members of the Special Operations Executive (SOE) to help organize and train the guerrillas, and deliveries of equipment and supplies. For the next four years the Cretan resistance harried the occupying German forces, tying down large numbers of enemy troops that could have been employed elsewhere. The Cretans suffered harsh reprisals as a result, including mass executions and the burning of villages.

This resistance and the help provided by the SOE meant that Crete became the stage for the exploits of a number of extraordinary British servicemen such as Patrick Leigh-Fermor, Dennis Ciclitira, Billy Moss and Xan Fielding. Perhaps the most famous episode was that immortalized on screen in the film *Ill Met By Moonlight*, starring Dirk Bogarde as Leigh-Fermor. The incident was the capture of General Heinrich Kreipe, commander of the 22nd Luftlande Division by Major Patrick Leigh-Fermor and Captain Stanley Moss with two Greek SOE agents on 26 April 1944. Their original target had been Friedrich-Wilhelm Müller, but as a result of delays in the group's rendezvousing on Crete, Kreipe had replaced Müller. It was decided that the attempt should continue as planned nevertheless. The site for the ambush was a T-junction where the Arhanes road met the Houdesti–Heraklion road, with high banks and ditches on each side. The British officers were disguised as German traffic policemen and could speak German very well. Waving red lamps and traffic signs they flagged the car down and told the driver that the road was unsafe further on. The general was quickly captured and taken prisoner, and when he began to shout was told that he was a prisoner of British commandos and had better shut up. Some of the party then got into the car and drove on with the general until they reached the point where they had to cross the mountains on foot. The commandos left a note in the car that read:

> TO THE GERMAN AUTHORITIES IN CRETE
>
> Gentlemen, Your Divisional Commander, General KREIPE, was captured a short time ago by a BRITISH raiding force under our command. By the time you read this, he will be on his way to Cairo. We would like to point out most emphatically that this operation was carried out without the help of CRETANS or CRETAN partisans and that the only guides used were serving soldiers of HIS HELLENIC MAJESTY's FORCES in the Middle East, who came with us. Your General is an honourable prisoner of war and will be treated with all the consideration owing to his rank. Any reprisals against the local population will be wholly unwarranted and unjust.
>
> Auf baldiges Wiedersehen!
>
> P.S. We are very sorry to have to leave this beautiful car behind.

The Germans initially thought that he had been taken by guerrillas and, in a quickly printed leaflet, threatened to raze every village in the Heraklion area to the ground and take severe reprisals against the local population. Patrols and reconnaissance aircraft combed the hills leading south (the most obvious escape route) and in fact occupied the beach that had been selected for the evacuation. Fortunately the commandos heard about this and remained hidden while a new evacuation point was selected. It took the party 17 days to reach the new beach, during which the general fell and his arm had to be put in a sling. The group reached the rendezvous successfully and were taken off safely, reaching Mersa Matruh on the North African coast after a stormy crossing.

PART II

US AIRBORNE FORCES

Pathfinders of the 101st Airborne Division before boarding for Operation Market*, their jump north of Eindhoven in the Netherlands on 17 September 1944.*

US PARATROOPER

Carl Smith

Recruitment and training

At the start of World War II, there were two routes a man could follow to join the US military. He could either volunteer or take his chances with the draft. The draft (or conscription as it was officially known) was the process by which any citizen over age 18 could be called up for military duty. A man who volunteered for service joined at the time of his choosing. Conscripts, however, were called up at the behest of the draft board, and although they could request a specific branch of service, requests were only honoured if positions were open; otherwise men were allocated where the military's need was greatest. A man was generally eligible for the draft until his 25th birthday. If his number was pulled, he received a 'compliments of Uncle Sam' letter that told him when and where to report.

At the recruiting station, a volunteer was shown the various branches of military service and had a chance to volunteer for units that needed men. In late 1942, new recruiters, who wore spit-shined, hard-toed Corcoran jump boots, began appearing at recruiting stations. They were there to find suitable recruits for the airborne. The recruiters, with their elite uniforms, special training, and esprit de corps, appealed to many young men. Those who were interested were asked to perform a series of backward and forward rolls and were graded as suitable or unsuitable depending on their performance. Some recruiters even approached members of National Guard units. The airborne, like the Marines, wanted 'a few good men'. Quality, not quantity, was their unwritten credo.

Opposite
Nearly three sticks of paratroopers and parapacks filled with their gear are visible in this picture. The fully laden paratrooper in the foreground holds his forward risers, pulling down on them to manoeuvre his 'chute forward. (Airborne & Special Operations Museum)

Basic training

There were two kinds of basic training: traditional and the newer, cadre style. In traditional training, a recruit was sent to basic for 13 weeks, then went to his unit either directly or via an advanced school. Prior to the development of the airborne, most soldiers went through traditional training.

The airborne was particularly strong in the use of cadre, utilizing a nucleus of men from an existing unit to create a new unit. The cadre would also be used to train the new unit's

recruits in basic military skills (basic training), although the cadre would itself first be sent to Jump School for four weeks of airborne training. When trainees of the new unit subsequently went through Jump School at Fort Benning, those who were physically or psychologically unfit were weeded out. The cadre would become officers and NCOs of the new unit upon its completion of Jump School.

The cadre of a new unit would be treated like any other recruits, regardless of rank, while at Jump School. To graduate, they had to successfully complete five jumps and, to remain qualified as paratroopers, they would need to make at least one jump every three months. Cadre received intensive instruction on how to train recruits.

The 508th Parachute Infantry Regiment (PIR) is a typical example of a cadre unit. The cadre went to Jump School at Fort Benning, but moved their recruits to Camp Blanding, Florida, for basic training. For 13 weeks, the 508th's recruits learned soldiering skills in a

CHRONOLOGY

1928

29 April	At Kelly Field, Texas, a machine-gun team parachutes, successfully lands and makes its landed gun operational.

1939

May	The Chief of Infantry proposes the formation of a detachment of air infantry. The Army Air Corps desires that paratroopers be placed under its control as 'air grenadiers'.
Late 1939	The fledgling parachute unit is put under control of the infantry (AGF).

1940

29 August	The first mass jump of US paratroopers.
1 October	The 501st Parachute Infantry Battalion (PIB) is formed from the cadre of the Test Platoon.

1941

1 July	A second parachute battalion, the 502nd, is formed.
8 December	The US declares war on Japan.
11 December	Germany and Italy declare war on the United States.

1942

24 February	1st Battalion is re-designated as 501st PIB.
25 March	82nd Airborne Division is formed.
15 August	101st Airborne Division is formed.
2 November	The 501st is deactivated in Australia and its components are re-designated as the 2nd Battalion, 503rd Parachute Infantry Regiment (PIR).
7–8 November	Overnight, US paratroopers of the 503rd PIR under Raff leave England and fly to Oran where only 18 per cent actually jump and assault their objective. By the end of the day, the airfield at Oran is under Allied control.
8 November	Operation *Torch* (Allied landings in French North Africa) begins.
15 November	Raff's 503rd assault an airfield near Tebbessa, Tunisia. A new 1st Battalion, 501st, is activated at Camp Tocoa, Georgia.

1943

25 February	11th Airborne Division is formed.
15 April	17th Airborne Division is formed.
9–10 July	Operation *Husky*: Paratroopers jump near Syracuse in the campaign for Sicily.
20 July	The 1st Special Service Force, later to be nicknamed the Devil's Brigade by the Germans, is formed under Brigadier General Frederick.
13 August	The 13th Airborne Division is formed.
14 August	Sicily falls to the Allied armies.
17 August	Patton enters Messina hours before the British. The battle for Sicily ends.
5 September	The 503rd PIR jumps at Nazdeb on the Markham River, New Guinea.
9 September	In the Salerno Campaign, the Allied amphibious invasion stalls on the beach; the British 1st Airborne Division lands at Taranto and two days later takes Brindisi.

13 September	In an airlift, the 504th PIR and 325th Glider Infantry Regiment (GIR) land near Paestum and defeat three German Panzer divisions.
14 September	The 504th drops 1,900 paratroopers and the 325th GIR land by sea to take part in the struggle.
November	The Devil's Brigade takes part in the Aleutians campaign.
2 December	The Devil's Brigade breaches the Winter Line.

1944

22 January	At Anzio, Allied landings begin.
10 April	The 504th Regimental Combat Team (RCT) is withdrawn from Anzio and sent to England to train for D-Day.
4 June	The Devil's Brigade and other units of the 88th Division enter Rome.
6 June	Operation *Overlord* begins.
3 July	1st Battalion of the 503rd PIR jumps at Noemfoor Island to take Kamiriz airfield in the New Guinea Campaign.
15 August	Operation *Dragoon* begins.
28 August	Marseilles and Toulon fall to the Airborne Task Force (ATF).
17 September	Operation *Market Garden* begins.
16 December	The Battle of the Bulge begins in the Ardennes.
17 December	The Allies plug holes in their line using the 82nd, 101st, 509th, 517th, 550th and 551st Airborne units, which are brought to the front overland.
22 December	St Vith falls to the Germans.
26 December	The US 4th Armored Division reaches the Americans and Patton's Third Army arrives to turn the tide.

1945

16 January	The Battle of the Bulge ends as the 1st and 3rd Allied Armies link at Houffalize.
31 January	Two regiments of General Swing's 11th Airborne Division (without the 511th PIR) land by sea near Manila.
3 February	In a three-wave attack, Swing's 511th PIR assaults Tagaytay Ridge while other American troops advance from seaward.
9 February	The 11th Airborne attacks Japanese units south-east of Manila.
13 February	The 11th Airborne takes Nichols Field near Cavite.
16 February	The 503rd RCT drops on the 'fortress-island' of Corregidor in Manila Bay.
23 February	Company B of the 511th PIR, 11th Airborne Division, jumps 30 miles (48km) behind Japanese lines to take the Los Banos prison camp, in what is regarded by many as the most successful airborne mission of World War II.
26 February	Corregidor falls to American troops.
2 March	General MacArthur returns ('I shall return...') to the Philippines.
3 March	Manila falls to US troops.
9 March	US 9th Armored Division takes the Bridge at Remagen.
22 March	Patton's Third Army crosses the Rhine at Oppenheim.
23 March	Operation *Varsity* begins.
29 March	Negros Island, Philippines: the 503rd PIR and other US troops assault by sea. Nine weeks later the island falls to American troops.
13 April	American forces land on Fort Drum ('the concrete battleship') in Manila Bay, which is held by Japanese troops.
26 April	The American Division lands at Negros to help pacify the island.
7 May	The war in Europe ends. The 82nd Airborne is designated as part of the Allied Occupation Army.
10 June	The 508th (of the 82nd) takes up its post-war duty station at Frankfurt-am-Main.
23 June	Paratroop landing of the 1st Battalion, 511th PIR, 11th Airborne Division, near Aparri at the mouth of the Cagayan River on Luzon's north coast.
July	The 82nd Airborne enters Berlin.
2 September	The Japanese sign the surrender aboard the USS *Missouri*; the 11th Airborne Division enters Japan where it will remain the main occupation force.
16 September	17th Airborne Division deactivated at Camp Myles Standish, Massachusetts.

1946

25 February	The 13th Airborne Division deactivated at Fort Bragg, North Carolina.

A US paratrooper poses in his uniform, 1942. (Time & Life Pictures / Getty Images)

basic training course set up by their cadre. Upon graduating from basic training, both the cadre and trainees moved back to Fort Benning for Jump School. As most officers and cadre had already received jump training, they were given additional training (such as detailed demolitions or other courses). The unit's recruits, meanwhile, were turned over to drill instructors and drill sergeants for four weeks of intensive paratroop training. After graduation from Jump School, the unit was reunited and moved to Camp Mackall, North Carolina, or Fort Bragg, also in North Carolina, for additional training and manoeuvres, which would help hone the paratroopers' recently acquired skills.

Quarters and gear

Recruits were first gathered at local induction stations, from where they were sent to major induction centres via train or bus. After working their way through a mountain of paperwork, new recruits were assigned to basic training companies. These companies were composed of platoons, which were further broken down into squads. After 13 weeks of basic training and four weeks of Jump School, paratroopers were sent to their companies to work within their teams and practise individual skills.

There were numerous basic training camps around the United States, and some, such as Fort Benning, still exist today. Upon arrival at training camp, the new recruit received his first military haircut, whether he needed it or not.

Next, recruits were assigned barracks, and then they were marched (one of the few times they marched rather than ran) to the supply room to get boots, clothing, fatigues and other issued gear. Each recruit signed documents verifying that he had been given a basic issue. Everything was signed for and accounted for in the army. Recruits soon learned that there was much truth behind the army cliché, 'If it moves, salute it; if it doesn't move, sign for it. If it disappears, pay for it.'

New uniforms were dumped into the recruit's waiting arms, then stuffed into duffel bags. Recruits were marched back to their barracks to straighten out their foot and wall lockers, put away their clothing and clean their living quarters.

Many of the barracks used during World War II are still standing, and some are still in use today. They were arranged near a training company headquarters and positioned with their front doors facing a central walkway. Near the training battalion barracks complex was a day room for soldiers' use, a mess hall, and a company headquarters, which was attached to the supply room.

To one side of the barracks' front door was a shower room with lavatory. Opposite the shower room was a flight of stairs that led up to the second floor. Beneath the stairs was a single room for an NCO. The rest of the downstairs interior was a large area called a squad bay. This area was broken up only by uprights that supported the rafters. Bunks, footlockers and wall lockers lined the central aisle of the squad bay. Upstairs were two rooms at the head of the stairs followed by a similar squad bay.

Down the central aisle were several empty one-gallon fruit cans, which were filled with sand and used for smokers to put their cigarette butts in. They could also be used as emergency fire extinguishers on a small fire. Each morning cigarette butts were dumped from cans prior to inspection.

Recruits were assigned bunks, either a lower or an upper. Bunks were arranged 'head to toe', meaning that if the bunkmate above or next to you had his head to the wall, your head was to the central aisle of the barracks. When double-bunks were used, 'downstairs' bunkmates, to both your left and right, would have their heads to the wall, whereas upstairs mates would have their heads to the aisle. This head to toe arrangement, with both upper and lower alternating, was employed to prevent the spread of infectious diseases.

Every recruit had two blankets and two sheets to make the bed. When the bed was made correctly, a sergeant was able to bounce a quarter on it to show that it was tight. Many recruits had their beds torn up before their eyes and were berated for having a cover that the sergeant couldn't bounce a quarter on. Recruits soon learned to sit on the closed cover of their footlocker, rather than their bunkmate's bed. Hard words or even harder fists would quickly remind the forgetful.

Each recruit had a footlocker, which was positioned either at the end of the bed (in the case of downstairs bunkmates) or beneath the lower bunk (in the case of upstairs bunkmates). Other equipment was stored in wall lockers at the head or side of the bed. These lockers were metal, with ventilated doors, and were in a style similar to those found at schools and train stations.

During inspections, clothing, issue gear and personal hygiene items were displayed on the bunk. There is a correct way to display gear in a footlocker, using a towel (to cover the bottom of the shelf) beneath the razor, blades, shaving soap and mug, toothpaste and toothbrush. Similarly, t-shirts, underwear, extra fatigues, extra belts and handkerchiefs were to be displayed in a peculiarly military fashion. Many recruits heard their sergeant bellow, 'There are three ways of doing things, the right way, the wrong way, and the military way.'

Extra boots and shoes were displayed under the bunk, with those belonging to the bottom bunk's occupant facing the side of the bed and closest to the centre aisle. The occupant of the upper bunk was to position his boots to the head of the bed. Field jackets and dress uniforms were hung with their fronts facing left in wall lockers. All footgear,

Members of the US Army's parachute test platoon – all volunteers from the 29th Infantry Regiment – prepare for a jump at Fort Benning in 1940. They wear flying helmets and the T-4 parachute, whose reserve was attached vertically with the ripcord handle on the right.

fatigue blouses and trousers were generally marked with the owner's service number, whereas underclothing and socks (which were regarded as interchangeable) were not.

Field gear was issued later. However, before recruits got helmets, shelter halves and tent pegs, they had to learn to march and salute. The issue duffel bag was stencilled with the recruit's last name, first name, middle initial and service number. Recruits were given service numbers when inducted and told to memorize them. 'Forget your name,' many a NCO intoned, 'but remember your number.' For many years, service numbers had prefixes (such as RA for regular army, US for conscripts, AR for Army Reserve, NG for National Guard and O for officer), but this practice changed during the Vietnam War, when all personnel used social security numbers in lieu of service numbers.

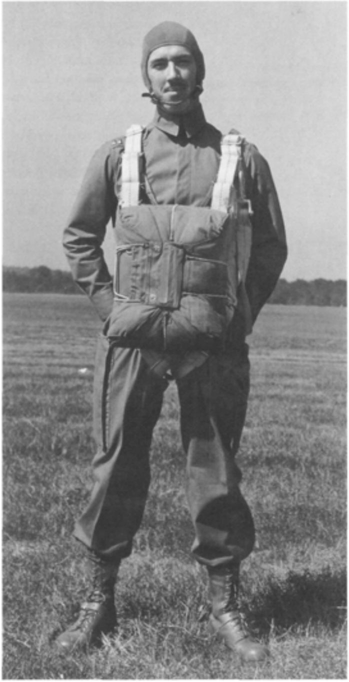
Basic training: the reality

The purpose of basic training was to rid a man of his civilian habits, replacing them with the military way of doing things. Basic training was also intended to make the recruit physically fit. The first day of training would frequently see a drill sergeant, dressed in immaculate fatigues and World War I campaign hat, line up his charges and eye them as if they were distasteful criminals. His boots would be highly shined, reflecting the sunlight, as did his spun-shined hat brass and belt buckle. By action as well as word, drill sergeants set an example.

Phrases such as, 'You call that clean?' and 'You call those boots shined?' would frequently screech from the mouths of drill sergeants in the direction of new recruits. There was no correct answer, and in addition to cleaning the area or polishing his boots, the offending inductee was frequently rewarded with additional push-ups. 'Drop and give me 20,' the drill instructor might growl at the hapless recruit. The inductee would also discover the truth of the adage, 'Hurry up and wait'. Inductees ran, quick marched, or double-timed everywhere. Once the recruits reached their destination, they stood in military lines until the instructor arrived and told them to be seated. If the drill sergeant was in a good mood, he let the men stand 'at ease' instead of ramrod straight. Later in training, when the men were more 'military', the drill sergeant might let them fall out (in place) to 'Smoke 'em if you got 'em'.

During basic training a recruit underwent weeks of intensive physical and mental training. He was also introduced to the basic military skills in terms of proper dress and etiquette, everyday life and working as a member of a team. Every member of the US Army is a rifleman, meaning he is trained and proficient with a rifle. He is classified and earns a medal as Expert, Sharpshooter or Marksman, depending on how well he scores on the firing range. After firing, trainees are taught to give their weapons a rudimentary clean.

Drill sergeants accompanied their men to all classes. Many classes were held in outdoor classrooms with raised stages. A drill sergeant would march or jog his men to the class and, although another drill sergeant would usually take over instruction, he would roam around his men, correcting their performance. In learning situations, the drill sergeant helped soldiers grasp the basics of disassembling the Garand rifle, or the correct way to shoulder, port or trail arms. Close order drill was heavily emphasized during the first weeks of training, as was physical exercise. If nothing else, the inductees would look like soldiers by the end of their training.



First Lieutenant William T. Ryder from the 29th Infantry Regiment, who volunteered and was designated the parachute test platoon's platoon leader. (Airborne & Special Operations Museum)

The daily routine

A typical day would see a soldier rise with the sun, exercise, eat breakfast, follow company duty until 08.00hrs hours, and then attend classes until 12.00hrs. After morning training, he had an hour for lunch. At 13.00hrs, training began again and lasted until 17.00hrs, when the recruit returned to his company area for supper. Most meals were served hot, and soldiers were expected to eat what they were given. A staple was chipped beef on toast, and it was served with such frequency that it was dubbed SOS ('Same Old XXXX' or 'Stuff on a Shingle'). Until lights out at 21.00hrs, the soldier could take care of personal needs, shower, write letters, do company duty, or relax.

Usually soldiers followed the same routine Monday through Friday. On Saturdays, recruits worked until 13.00hrs. On Sunday, men without passes were confined to the barracks or company area – unless they attended chapel services. Church services were between 08.00 and 12.00hrs, and generally soldiers attended because those remaining in the barracks were often pulled for company details. Recruits learned that if you made yourself scarce on your 'free' time, you could generally avoid getting pulled for ad hoc police details, fire detail, or for use as a company runner.

Off duty

Most trainees found it difficult to adjust to a life in which they were not permitted to move around freely. Someone had to know where they were at all times so that if their unit was called up, they could be located quickly. When leaving the company area, soldiers had to sign out in the company day book (which was kept in company headquarters), giving their destination and length of stay (in hours). Soldiers were accountable for every minute of their day. If a man wanted to leave the base and go to town when he had no duties, he had to get a pass from the company headquarters. Rarely more than half or two-thirds of a unit got a pass (for short, one- to two-day absences) and few men were granted leave (usually an absence from the unit in excess of three days).

If a soldier was stopped by military police outside the base and did not have a pass on him (whether he had been granted one or not), he was charged with being Absent Without Leave (AWOL). Small infractions were regarded as a company offence and were punished with extra company duty, a fine, a demotion to the next pay grade or partial forfeiture of pay. For lengthier absences, a soldier could be sent to the guardhouse.

Phoenix City, Alabama, was the destination for many paratroopers with passes. Long-time proximity to the military base saw to it that Phoenix City developed a somewhat worldly atmosphere. There a paratrooper could find a hot meal, a drink, gambling and female companionship. Prostitution flourished in Phoenix, as it did near most military bases. There were also the inevitable drunken brawls, which were punished by partial forfeiture of pay, extra duty, or a short stint in the guardhouse for more severe infractions.

When one paratrooper was arrested for having sex with a woman on the grounds of the courthouse in Phoenix City, the base CO asked General Gavin what he was going to do with the man. He replied that, instead of punishing him, they should give the paratrooper a medal, as they were asking him to give his life for his country. The soldier received only light punishment.

It wasn't merely enlisted men who got drunk and rowdy; officers did, too. On more than one occasion MPs were called to the officers' club because paratrooper officers were trying to top one another by jumping from progressively greater heights, starting from the bandstand, then the balcony, and finally from a second-storey bathroom window.

Missing a formation or a roll call by one minute technically made a man AWOL. Similarly, slipping off-post to visit family or going to a bar in town was a form of AWOL. An absentee would initially be charged with AWOL until the authorities could determine, either by the length of his absence or by discussions with his messmates, that he did not intend to come back. Once this had been established, he was declared a deserter. Desertion carried a minimum prison sentence and could, in extreme conditions (such as desertion in the face of the enemy), incur the death penalty.

Each company's dayroom had a log of men who had been given passes. Every soldier had to keep his pass on him and produce it upon demand. Any soldier walking through the front gate could be stopped by the MP on duty and asked to show his pass. Similarly, in town, MPs could stop soldiers and ask to see their passes. If a man could not produce his pass, he was arrested. Usually MPs did not stop soldiers unless the soldier was drunk, rowdy or otherwise causing a public disturbance. Once a soldier was stopped, he was always asked for his pass.

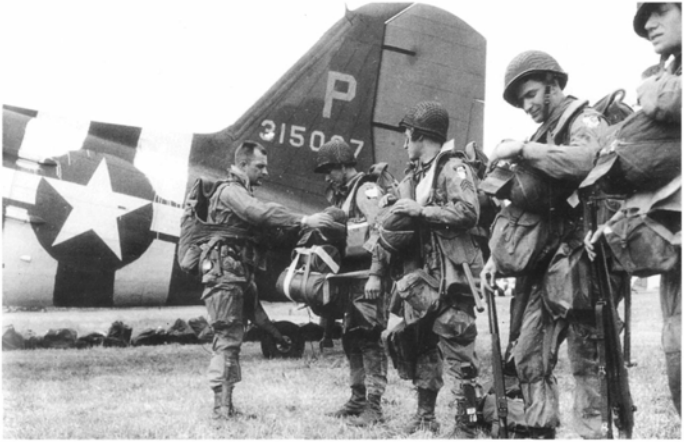
In barracks or town, men played poker and blackjack to pass the time. Others indulged in a variation of mumbly-peg. This dangerous game saw the soldier hold his knife in one hand and jab the point between each finger of his other hand in sequence as fast as he could. The man who did it the fastest and the most times (without cutting off a digit) was the winner.

Classroom and hands-on training

Essentially there were two kinds of training classes in the military: classroom and hands-on. Classroom situations taught theory; hands-on concentrated on practical skills. The early weeks of basic training had a high PT (physical training) content, much of it in hour-long company callisthenics sessions. PT and drill occupied much of the new recruit's first weeks, sometimes up to half a day, every day. PT consisted of push-ups, running, chin-ups, jumping jacks, sit-ups, squat thrusts, four-count toe touches and rifle drill.

Callisthenics sessions, which were based around formalized physical activities, started with the men standing in formation, shouting 'Dress-right-dress!' to put distance between themselves and other soldiers. Once every soldier had his own personal space, exercise began. Sometimes, at the end of a set of exercises, soldiers were instructed to shout 'More PT, drill sergeant!' as if they really wanted it.

Paratroopers of the 101st Airborne have their 'chutes and equipment checked by Lieutenant Bobuck prior to boarding their C-47 for the flight to Normandy. The C-47 in the background has had the black and white D-Day invasion stripes hastily painted on.



Opposite
A good view of the heavy and cumbersome burden carried by US paratroopers for the Normandy jump.

For a break in organized group PT, soldiers ran the company obstacle course or jogged 5 miles (8km). Often small obstacle courses were set up outside the mess hall. These consisted of a run, dodge and jump, low crawl, chin-up bar and overhead (monkey) bars. The run, dodge and jump comprised two waist-high barriers about 1 yard (91cm) apart, which the runner stood in front of and, at a command, ran to one side of and between. Once the soldier was through the barriers, he jumped over a sand pit located 1 yard behind them. This part of the obstacle course taught agility, while the low crawl was good practice for crawling under machine-gun fire.

After the first few weeks of basic training, soldiers were placed on guard duty. This was a company duty and rotated among the training companies. Usually recruits guarded a supply building that was surrounded by a wire fence, or they walked a lonely post near office buildings. Rarely would recruits be entrusted with guarding a place of real responsibility. Often they walked a post in helmet and web gear, with a rifle and a fixed bayonet (usually in its sheath), but without ammunition.

At some point during the night the sergeant or corporal of the guard approached the post. He expected to be challenged with a cry of 'Who goes there?' The interloper would then give a countersign to identify himself and the guard would say, 'Advance and be recognized.' An eight-hour stand of guard duty at night would typically be divided into two hours on, four off, and two more on, although it could vary. Some soldiers pulled four hours straight and then four off. The day after guard duty, men were tired, but they continued with their regular routine of training, learning to function despite sleep deprivation.

In the military, the term 'police' means to clean an outdoors area thoroughly, picking up paper, errant cigarette butts and trash. In addition to guard duty, inductees could be put on Kitchen Police (KP), headquarters runner, dayroom duty with the NCO in charge, nightly fire detail or hourly fire watch.

Kitchen Police was especially detested. Men on KP began work two hours earlier than other soldiers. They had to clean trays after meals, help prepare food for three meals, and were kept working until 20.00hrs or even later. Their clothes and boots would be greasy and filthy, and they had barely an hour to get themselves ready for duty the next morning before lights out at 21.00hrs.

Men assigned to fire detail kept the boilers running all night, stoking the furnace, emptying ashes into covered metal garbage cans and watching that the boiler didn't overheat. Fire watch was an hourly shift that rotated in the barracks, and each man caught it roughly once every ten days. Soldiers on fire watch were responsible for waking their relief and seeing that he was on duty before they turned in. After lights out, a man on fire detail patrolled around the barracks inside and out, checking that no fire had started from an errant cigarette butt, a hot ember from the hot water furnace or arson. If he detected a fire, the fire watch was to wake his fellow recruits. All details prepared recruits for working on only a few hours' sleep. A soldier's training had to teach him the realities of military life.

As 'basic' went on, training shifted from the PT heavy instruction of the early weeks to more practical skills, such as the techniques of marksmanship, hand-to-hand combat, bayonet practice, grenade practice and learning bivouac skills. The classroom studies, however, did not come to an end and always preceded the hands-on sessions.

Bivouac was frequently a city boy's first introduction to the great outdoors. This three-day event saw soldiers camp out, learning the basics of erecting a tent, digging a slit trench (latrine), walking guard duty at night, keeping an area secure and protecting their weapons from night-prowling drill sergeants. Any man unfortunate enough to find that his weapon had disappeared was made an example of the next day in formation and faced push-ups and extra duty.

Paratroopers were taught rifle marksmanship in basic training and the use of special weapons in their subsequent individual training. Like every US foot soldier, the paratrooper was a rifleman first. Learning to fire a .45cal automatic pistol and to throw a grenade was also standard practice. The paratrooper followed bayonet training too, learning to thrust and slash, or even use his rifle stock in close combat.

During basic training, all soldiers learned unarmed hand-to-hand combat. Recruits were taught how to disarm an enemy who had a rifle, how to fight with a knife, and how to throw an enemy to the ground and stomp on him. No trick that could keep a US soldier alive was overlooked. Paratroopers were often given extra hand-to-hand training due to the nature of their combat missions.

After basic training, men were in good physical condition, understood the fundamentals of marksmanship and were aware of the proper way to wear their uniforms. However, above all else, they had learnt how to obey orders. 'If I say jump,' the drill sergeant would say, 'I want you to ask, "How high?"'

For a trainee paratrooper, 'basic' was just the first rung of a ladder. To climb to the top, a man would have to give his all and push himself to his mental and physical limits. Most soldiers would only discover those limits at Jump School.

Jump School

Paratrooper training, called Basic Airborne, is unofficially known as 'Jump School' and takes place at Fort Benning, Georgia. At Jump School, aspiring paratroopers learn how to pack their parachutes, how to ride properly in an aircraft, how to de-plane, how to fall safely past the plane's tail, how to open their 'chute and guide it to the ground, and how to rejoin their comrades to complete their mission. Paratroopers are also trained to think, be resourceful and complete a mission. During World War II, paratroopers could also take additional courses to enable them to become jumpmasters or pathfinders.

Jumpmasters were the on-plane experts who organized the jump and were there to make decisions and solve problems, both on the ground and in the air. In training, jumpmasters were instructors, but in combat jumps, they were usually the officer or NCO at one end of the stick. Pathfinders were specially trained paratroopers who jumped into an area ahead of the main force and marked the drop zone, so that the aircraft could locate it. Sometimes pathfinders laid out landing zones (LZs) for gliders too.

Airborne recruits and Jump School

Because paratroopers have to perform special tasks under extreme conditions, physical and psychological training is a must. Jumping from an aeroplane is easy the first time, but doing it again is much harder, because the paratrooper knows what's coming. The jump is physically quite straightforward, but the stress of the parachute yanking a falling soldier into a gentle descent is hard on the body. Landing is also perilous, and broken legs and sprained joints are commonplace. Cuts and bruises, as well as 'strawberries' (rough abrasions to the neck and sometimes shoulders from the chafing of the harness) were the norm for the average World War II paratrooper. These were the acceptable risks of the job.

After basic training, soldiers knew that anyone with a stripe on their sleeve or bars on their collar was higher up in the chain of command and had to be obeyed. In the military, chain of command was usually all-important, but the airborne bent military protocol and further developed the individual. This was because of the nature of the paratrooper's job, whereby missions had to be completed at all costs.

Jump School lasted four weeks and was divided into four stages, which were labelled A, B, C and D. Each stage was progressively more difficult than the former and each built upon the skills previously acquired. While the recruits went through Jump School, their cadre received additional individualized training in demolitions, ordnance, communications or the like. Everything at Jump School was intended to prepare the paratrooper for a jump behind enemy lines.

The first week of Jump School (A stage) featured increasingly demanding physical exertion. Everyone ran everywhere, and when they weren't running, recruits were dropping and giving the instructor 20 push-ups. For fun, men ran the obstacle course outside the mess hall. While waiting for meals, soldiers were expected to stand at attention or run the obstacle course. No one ever walked, unless injured. It was an approach calculated to make or break the trainee.

The second week (B stage) saw a reduction in physical training and a growing focus on skills training. Men were taught the proper way to jump from an aircraft, how to guide the parachute and how to land. The paratrooper was familiarized with the key techniques that had to be mastered before he was ready for his basic mission. Paratroopers started by jumping from dummy doors just off the ground, graduating to sliding down controlled descent wires from 35ft (16.5m) towers.

Week three's training (C stage) taught soldiers the proper manner to pack a parachute in the packing sheds, how to leap from the 250ft (76m) jump towers, how to parachute free-fall, how to guide the parachute in practice, how to open the

US paratroopers helping one another load up before emplaning for a jump.

emergency 'chute, how to absorb landing impact, how to perform various rolls upon landing, and how to collect a 'chute and get to the staging area. Paratroopers may have initially lacked interest in the parachute packing hangars; however, eyes widened once the drill instructor mentioned that every man would jump using a 'chute he had packed himself. After that statement, interest in rigging and packing parachutes became intense.

In parachute packing sheds, parachutes were laid out on long tables before being packed, in reverse order, into the canvas-covered metal-framed packs. Risers went in, then the shrouds, then the bottom of the parachute, and finally the apex, which was connected to the deployment bag and the static line. To keep everything separate and restrain the slippery silk, or nylon, 'chutes during packing, sausage-size bags of shot were laid across the 'chutes.

The last week (D stage) was the real thing: five jumps from aircraft – the last of which was a night jump. The height for the first jump was 1,200 feet (365m); the second, 1,000 feet (304m); the third and fourth, 800 feet (243m); and the night jump 1,000 feet (304m). After completing the night jump, a man was qualified to put on silver jump wings, blouse his pants into highly polished boots, and call himself a paratrooper. The final activity in Jump School was a formal parade, at which paratroopers were awarded their wings.

The basics of Jump School

Every paratrooper – from general down to private, from rifleman through chaplain, from medic to cook – went through Jump School and earned his wings. To earn wings, he had to jump and, at Jump School, the instructor was the law. Even officers going through Jump School had to obey their instructors' orders. With characteristic airborne enthusiasm, instructors relished the task at hand. They would rarely speak in normal tones, opting instead either to bellow or to whisper. Most men preferred to hear bellowing as opposed to the barely constrained violence hidden behind the quiet voice of an annoyed instructor.

Raw recruits or those already in the military could request Jump School. Even officers had to volunteer. When asked why he became a paratrooper the author's father replied:

> I was at OCS at Fort Benning. It was after lunch one day and before afternoon classes. The day was warm and I was looking at the sky, thinking how peaceful it was. I saw an airplane disgorge some paratroopers on a training exercise. They floated toward the ground. It looked serene, and I thought, 'That's for me.'

The airborne was a great experiment. Every soldier trained hard. It did not matter what a man was when he came to Jump School; what mattered was what he was when he left. A man wearing jump wings was self-reliant, a master of weapons, a team player, and believed in the maxim, 'The difficult we do immediately; the impossible takes a little longer.'

Jump School routine

A standard day began with shaving and showering. This routine was followed by a 5-mile (8km) run before breakfast. After breakfast, soldiers quickly cleaned their barracks area for inspection, which occurred later in the morning, and then they fell in for classes. Sometimes classes were callisthenics or PT, while other classes taught skills such as parachute folding, proper landing technique (knees together, slightly flexed, ankles together, and toes slightly pointed to take up the impact of landing), and how/when to open the reserve 'chute. Practice sessions would see troops put on mock harnesses and learn how to guide the 'chute down a 35ft (16.5m) guide wire toward the ground. Troops were next introduced to the jump towers, from which they could experience mock jumps. Men were raised 250 feet (76m) into the air while wearing a harness that was released to give them the experience of free-fall and the shock of their 'chute opening (simulated by springs). Gradually the regime changed from strictly physical to the theory of jumping. The last week of Jump School was the final exam – jumping from an aeroplane.

The emphasis of Jump School was on physical and mental toughness. It was no shame to fall out on a run, but men were to complete the course, no matter how long it took. The airborne wanted men who could do the task to which they were assigned, and they wanted men who would overcome any obstacle to do so. Drill sergeants made it easy for men to drop out, yelling, 'You want to quit, don't you? Tired of running? The infantry loves men like you, and they get to walk everywhere.' The message was clear: The airborne was the best, and they wanted only the best.

General James M. Gavin once greeted a new officer by telling him what it meant to be an airborne officer: 'That means you're last in the chow line and first out the door [as jumpmaster of the aeroplane].' If an officer expected maximum effort from his men, he had to match their commitment.

Long marches were common, and a 25-mile (40km) hike in field gear was as much a part of training as a long-distance run. At the beginning of a run, the drill instructor might inform his charges that 'We're going to run, and we're not coming back until ten men drop out.' The instructor would keep the run going until ten men were out of the formation. Only when man number ten had fallen out did the drill sergeant turn his formation back to the company area. Men who dropped out were expected to return to the barracks on their own.

2nd Lieutenant Smith reminisced about one 25-mile hike his platoon took in full field gear during summer:

> On the hike, we stopped after 15 miles and I pulled off my boots. I counted 14 blisters. I could see my men watching. Carefully I dried my feet and pulled my socks and boots back on my aching feet. Standing, I managed a small smile. 'Your feet hurt. My feet hurt. When I drop out, you can drop out.' Groaning, all arose and continued. Every man in my platoon completed the march. No other platoon managed that.

Paratroopers learned to read maps, use a compass and navigate to a designated location. Land navigation was an essential skill, because paratroopers were likely to land alone and need to find their objective quickly.

Jump towers and first jumps

Jump towers, with their steel crossbeams and protruding arms, look similar to modern power-line towers. They stand 250 feet (76m) tall, and are square-sided with four arms (one for each side so that several students can use them at a time). This design also enables students to practise jumping regardless of prevailing winds. An office, supply room or classroom is usually located between the legs of the base and the huge tower.

A paratrooper completes a test jump from a 250ft (76m) jump tower at Fort Benning. (Airborne & Special Operations Museum)

The trainee paratrooper is hoisted up in a harness and dropped. A second later, when the springs stop the fall, the 'chute 'opens' with a jolt and the trainee has to guide the 'chute groundward in order to land properly. Every trainee had to follow this practice routine at least twice. On the way down, the drill instructor would yell instructions; for example, he might tell the jumper to change hands on his D-ring.

The final week of Jump School saw students make one jump per day for five days. Trainees were allowed to blouse their boots now, but only for the jumps. Back in camp, the boots were not worn bloused. A few men who completed every phase of school would discover that, when push came to shove, they couldn't jump. When the aircraft landed they were sent back to the company area and quickly transferred to another unit. Instructors at Jump School didn't want other paratroopers being exposed to men with a fear of heights. If a paratrooper was injured, he was sidelined until he was again fit for duty, and then he could complete Jump School. If for some reason he couldn't jump, he was transferred to another branch.

Taking the leap

Once the men 'saddled up' (put on their 'chutes and harness), they formed sticks of 12 to 18 men (depending upon the size of the unit) and boarded the C-47s through the doors on the left side of the aircraft. These were the same doors through which the aspiring paratroopers would later jump. The plane flew them to the drop zone, and a red light turned green when the time was right for each man to jump. By the time the students reached the DZ, the aircraft's speed was 100–150mph. When the aircraft approached the DZ, the jumpmaster would stand. His parachute was a pilot's emergency, free-fall style 'chute, which did not connect to the static line.

The pre-jump check was governed by specific commands. As the plane approached its DZ, the jumpmaster would yell, 'Stand up and hook up!' All paratroopers stood, faced the rear of the aircraft, and hooked up their static lines onto the cable. Next, the jumpmaster called, 'Check equipment!' Each paratrooper checked his own gear, making sure every snap was snapped, every buckle buckled. Then the paratrooper checked the equipment of the paratrooper who stood in front of him. If mistakes were found, they were corrected. He told his partner his gear was OK.

Once the paratrooper's equipment had been checked, the jumpmaster bellowed, 'Sound off!' This command meant that the men in the stick had to call out their number to confirm that their gear was in working order. The sound off started with the last man in the stick and went forward to the first man. Each man yelled out his number and then the word, 'OK'.

To number one, the jumpmaster called, 'Stand in the door.' To the remainder of the men in the stick, he yelled, 'Close it up tight', meaning they were to move toward the door where the first man waited. Ideally paratroopers should de-plane quickly, so that men from the same stick land in close proximity to one another.

In combat an officer jumped first, while the NCO was the last out. The man at the doorway would grasp the doorway at ribcage height, putting his left foot on the door. The second paratrooper put his right foot against the first paratrooper's right foot, and his left behind the first man's left. This practice was followed until all men were closely positioned. At the signal (usually the jumpmaster tapping them on their left leg) the men would jump in sequence, each de-planing and turning left, toward the rear of the aeroplane, thus avoiding propwash (the aircraft's slipstream) and the accompanying thrust to the left.

The jumpmaster would typically study the ground below, seeking signs that they were on course as they approached the DZ. Once he was satisfied that the mission was on course, he would shout 'Ready?'

'Yes!' everyone would chorus.

'Go!' came the next command, as the jumpmaster tapped the first man, who jumped immediately, turning rearward as he went. The static line would pay out and snap taut as the paratrooper cleared the rear of the C-47. While this happened, the next man stepped to the door, the jumpmaster tapped his leg, and he exited the plane. Once training was complete, paratroopers usually followed at such close intervals that no taps were required. The stick moved forward, each man jumping in turn until only the jumpmaster and the static lines were in the door. Then the jumpmaster gathered the static lines, bringing them inside the aircraft for the ride home.

Once free of the plane, the paratrooper was taught to count, 'One-thousand-one, one-thousand-two, one-thousand-three ...' as he fell. While falling at anywhere between

Men of the 17th US Airborne Division prepare to jump at Wesel on the Dutch border during the operation to secure the Rhine crossing. (Getty Images)

Opposite
Paratroopers of the 82nd Airborne in North Africa, training for the jump into Sicily, summer 1943. (Airborne & Special Operations Museum)

100 and 150mph, the static line ripped out the back of the pack and freed the 'chute and shroud lines. By the time the paratrooper reached 'one-thousand-three', his 'chute should have deployed, his plummet changing to a grinding halt when the canopy blossomed. Next, the paratrooper had to reach up and grasp his risers, ready to control his descent.

If for some reason there was no jerk by 'one-thousand-three', the paratrooper was supposed to look up and see if his 'chute was deployed. If it was, he was to see if it was filling with air, or if it was fouled. Sometimes 'chutes filled late. If the 'chute was fouled, the paratrooper had to lift his reserve 'chute with his left hand (so in deploying it wouldn't snap up and break his neck) and pull the reserve 'chute's D-ring with his right hand. In three more seconds the reserve 'chute should have opened. Once the 'chute opened, the paratrooper was taught to see if there were any 'blown' (ripped out) panels that would change the dynamics of landing. Sometimes 'chutes didn't open. The falling paratroopers and their 'chutes were called 'streamers'. The result of a streamer was often, but not always, fatal.

Landing was by the book: knees slightly flexed, legs together (not bicycling) and toes down. When the paratrooper hit the ground, he was to roll, get control of his 'chute and collapse it. Once the 'chute was collapsed, the soldier was to get out of his harness, gather his 'chute, fastening it to the back of the pack-tray (using the bellyband), and then go to the assembly point. Once they reached their objective, those with serious injuries were put in ambulances and returned to the base hospital. The rest walked or limped back to camp.

In combat, once on the ground the the paratrooper bound his 'chute to his backpack using his bellyband and discarded it. The officer and NCO would move toward each other ('rolling up the stick') and account for each man who had jumped. Most units had signs and countersigns to identify each other.

For four days and one night, paratrooper trainees jumped. If a man's nerve failed, he was reassigned. If he was injured, he would have to make the remainder of his jumps when recovered. After five jumps, the man was a paratrooper and could pin the wings on his chest, and sew the paratrooper patch to his garrison cap.

Now he was ready for unit training.

Going overseas

Units developed their tactics and honed their combat skills while on manoeuvres in the United States. The 82nd and 101st, for example, participated in manoeuvres in Tennessee, having completed a period of training at Fort Bragg. One incident in Tennessee manoeuvres foreshadowed some of the problems of D-Day. Paratroopers were practising the British method of airdrops, in which aircraft flew line astern of the lead aircraft. Under this system, as each plane reached the DZ, the light came on, and the paratroopers jumped. American style saw the aircraft blanket the sky and paratroopers jump en masse. On the Tennessee manoeuvre, something in the line astern approach went wrong. The aircraft were astern, and the light came on. The paratroopers jumped and were scattered over more than 15 miles (24km) of countryside. Some men spent more than four days returning to base.

After completing their training, paratroopers were granted a brief leave. Then they would return to camp, from where they were moved to a staging area. To maintain secrecy, most destinations and staging areas were kept quiet until the soldiers were en route. The paratroopers' addresses were APO (Army Post Office) numbers and these were at centralized areas on the west or east coast. This precaution, which was supported by judicious censorship of outgoing mail, was intended to help maintain unit secrecy.

At staging areas (such as Camp Kilmer, New Jersey) paratroopers waited in camp (often with few, if any, passes) until their military transport vessel was ready to sail. When the vessel was ready, the men were moved dockside, shouldered their duffel bags, and boarded their transport (which would sail in secrecy), often linking up with convoys well offshore. These precautions were all taken to protect the transport vessels from U-boats. Casual conversations or idle references in letters could easily divulge a unit's destination.

Paratroopers of the 17th US Airborne Division descend near Wesel, Germany during the operation to secure the Rhine crossing, 24 March 1945. (Getty Images)

While on board the transport, soldiers were often limited to two meals per day – and even this was a monumental task for the messes aboard most ships. The men would spend their time doing callisthenics on deck, playing cards, reading, sleeping or writing letters. They were rarely permitted to shower more than once on a typical ten-day voyage. If weather permitted, the men were allowed on deck, but if weather was foul, they were confined to their quarters below decks.

Living quarters were stuffy, and were especially cramped in rough weather conditions. There was barely room for two men to pass in the aisles between bunks, which were erected using metal water pipes and canvas. Storage for duffel bags and personal effects was located in the area between the bunks and next to the bulkhead. Often a paratrooper's duffel bag was so tightly crammed in that the owner could not access it for the duration of the trip.

A few units went directly to Africa, but most sailed for Europe. The airborne's first port of call was Northern Ireland, where they established and built base camps and began to train. Camps were quickly set up, sometimes built from the ground up, and were usually located in the countryside. The paratroopers built the new bases along the lines of those at Fort Bragg and Fort Benning. These bases had wooden- or Quansett-hut structures, comprising barracks, day room, mess hall and obstacle courses. Parachute-packing sheds, unit supply rooms, and motor pools were also set up.

With their base established, paratroopers returned to the regimen of classroom and maintenance training. Time was now spent on callisthenics, parachute packing, the obstacle course, the shooting range, manoeuvres in the countryside and everyday company duty. Life resumed a comfortable rhythm, and often paratroopers were given passes for evenings or weekends.

Paratroopers with passes would eagerly descend on nearby towns and villages, attending community dances, visiting pubs, sampling local foods and beers and seeing local sights. Most of the local areas endured rationing, but American soldiers had access to nylons, chocolate bars and more meat. Often a grey area of commerce between locals and soldiers sprang up, and it was not uncommon to see locals with nylons or American cigarettes and Americans with Irish bacon or whiskey. In general, however, the often boisterous and fun-loving paratroopers rarely got into serious trouble with the people of Northern Ireland.

But the stay in Northern Ireland was only temporary. When the strategic thrust of the war became clearer, and men had acclimated to European weather, airborne units were transferred to England. The move took the paratroopers closer to mainland Europe and nearer to larger airbases. Here, airborne units underwent more training, more jumps and more waiting.

Even in England, however, it still seemed that the war was far away, and that the airborne would never get involved. When weekends came, paratroopers received passes and left their bases to meet their English cousins and see the countryside. As in Ireland, relations with the English populace were generally good, although American excesses often had conservative locals shaking their heads and protesting about US soldiers being 'Overpaid, over-sexed, and over here'.

Men from Raff's unit (the 501st), who had moved in with the 82nd, were treated as old hands because they had seen combat. These 'veterans' shared their knowledge with eager colleagues who had just arrived from the US. Paratroopers were impatient to find out when they would see action, but secrecy was the rule of the day. Men could only speculate, as they donned full gear for manoeuvres or an alert, as to whether they were about to experience the 'real thing'. However, with the exception of the Italian campaign, most paratroopers would have to continue to wait while the Allies finalized their D-Day planning.

Uniforms and equipment

Early jump gear

Early paratroopers wore modified coveralls as jump suits and either cloth aviator's helmets or football helmets. The jump suit changed from standard army issue coveralls to silk coveralls for a short while, but the lightweight silk suits proved highly heat retentive. Coveralls were eventually abandoned in favour of the 1942-style lightweight tan drab jacket with slash breast pockets and cargo side pockets (plus a built-in belt) and baggy trousers with multiple pockets, two of which were cargo-style and on the thighs.

At first regular boots and half boots were used, but these were replaced by the newly designed Corcoran jump boot. The Corcoran jump boot had reinforced leather toes and heels, which were made from separate rounded pieces of thick, saddle leather mounted on sturdy soles.

Early paratroopers jumped from B-18 bombers, but soon the Douglas C-47 became one of the most familiar sights in the war. This versatile and long-serving aircraft, which had a single cargo door on the left side (its cousin, the C-46, had a door on each side), was known to the military as the C-47 and to civilians as the DC-3. In early jumps, paratroopers were flown to drop zones by a dozen C-47 (Skytrain) aircraft. Each aircraft was capable of carrying up to 28 paratroopers and their equipment. The Waco CG-4A glider added to the Army Air Corps' delivery system. The Waco could carry six paratroopers and a jeep, light anti-tank gun, or field piece, or 15 glider infantrymen. Personnel entered through a door on the port side of the plywood glider and the nose swung up to allow a vehicle to be loaded.

The parachutes

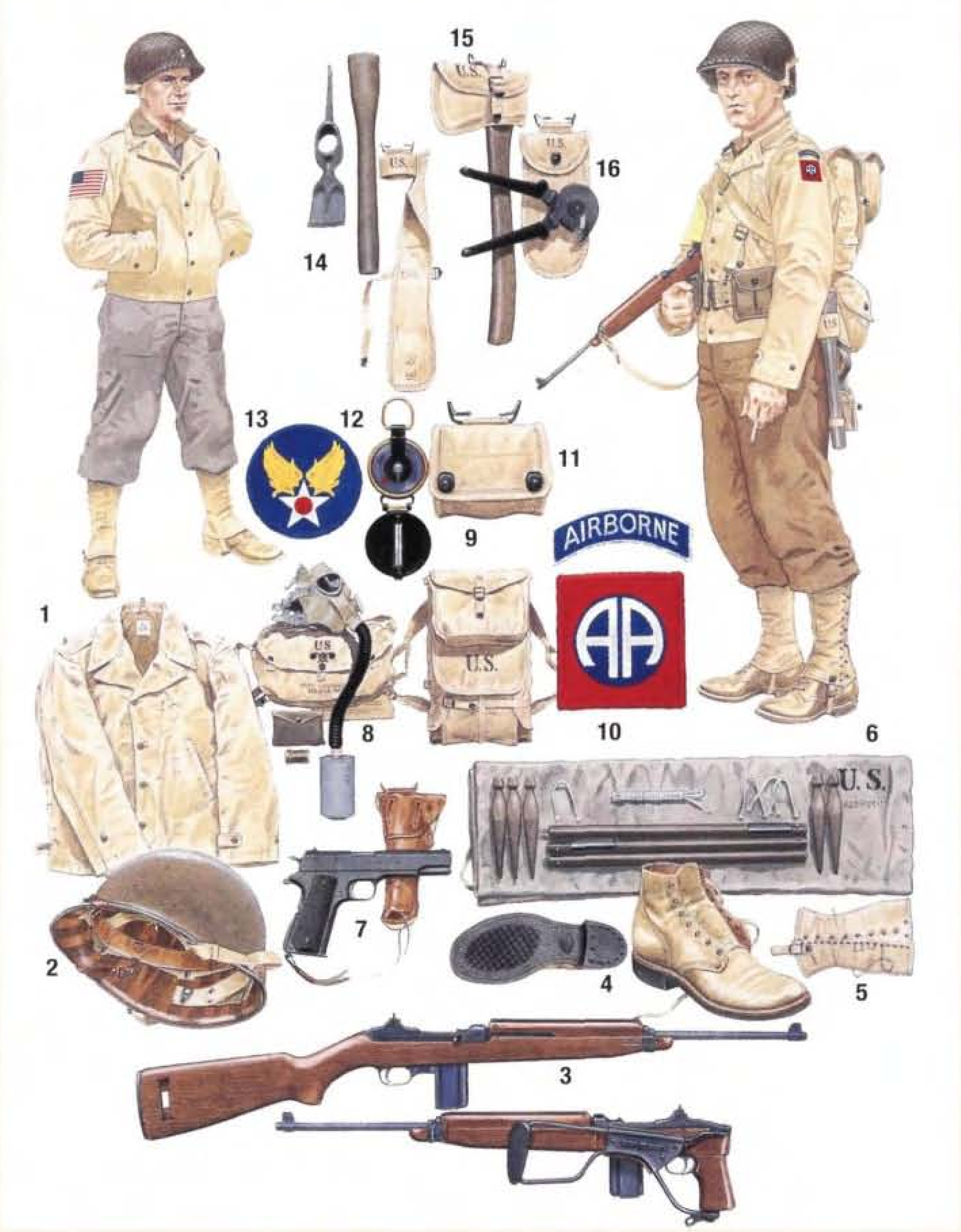
The paratroopers of World War II used three primary parachutes: the T-4, T-5 and T-7, each 'chute replacing its predecessor. The T-10 parachute was issued after the war, and modified versions are still in use today.

The first parachute was the T-4, which was used by the Test Platoon and the original 501st at Fort Benning. It was in use in 1940 and opened with a static line. The visible differences between the T-4 and later versions were twofold. First, the main 'chute was square and secured with three snap hooks, while the reserve 'chute was more rectangular and boxy. In this respect, the T-4 differed from the more lozenge-shaped later versions. Secondly, the T-4 was worn vertically on the chest and was bulky, leaving little room for additional equipment, whereas later reserve 'chutes were worn horizontally, thus providing space for extra gear. The T-4's harness was also looser than those on later reserve 'chutes. It was a cumbersome parachute that used space poorly, restricting the amount of gear a paratrooper could carry. The T-4's canopy deployed first, risers last.

In 1942 the 82nd Airborne was equipped with the T-5 parachute, reserve and harness. When the T-5 was adopted, the parachute main pack had a bellyband that fed through the back of the reserve 'chute. It had a 'D-ring' with its handle to the right and was worn horizontally to the ground, thereby enabling other gear to be carried beneath it. The T-5, which had secure clips rather than a quick-release mechanism like that employed on British 'chutes throughout the war, was time-consuming to remove after landing. US officials felt that single-point quick-releases were dangerous, arguing that a paratrooper might inadvertently open the release, slide out of his harness while descending, and plummet to his death. Without a quick-release, the T-5 was safe, but cumbersome to remove. The T-7, which was introduced in 1944 and remained in use until the mid-1950s, was equipped with a quick-release mechanism.

The T-5 parachute was in use from 1942 until 1945. It opened with a static line, and had three snap hooks. Each canopy panel consisted of four sections. The parachute had a wire frame-pack that was covered in canvas, and a harness that encircled the body. Like the T-4, its canopy deployed first, risers last. The T-7 had four straps that met in the middle of the paratrooper's chest, one of which had a quick-release mechanism. As a safety feature, the quick-release dial was turned and a cotter key was inserted so that it could not be accidentally opened. The T-7's canopy deployed first, the risers last. To release himself, the paratrooper pulled the cotter pin and hit the centre of the straps.

The paratrooper's issue parachute was coloured olive drab camouflage with dark-green, light-green and drab patches. The first parachutes were silk, but by the winter of 1943, they were being made from nylon. The harness and pack were cotton. All reserve 'chutes used by paratroopers were white. The 'chutes used by the regular Navy, Marines and Army Air Force were white, as they were emergency rather than combat equipment. The parachute canopy has a diameter of 28 feet (8.5m). An air vent (aperture) in the centre is referred to as the apex, and the 'chute consists of 28 triangular panels that are larger at the bottom than the top. Suspension lines (shroud lines) run from the canopy to the risers and measure 22 feet (6.7m) in length. Each panel has diagonal reinforcing bands that are sewn midway across the panel to prevent splits called 'blowouts'. A blowout makes the 'chute erratic and difficult to handle, causing a much faster descent than normal.



A GLIDER INFANTRY OFFICER OF 325TH GIR, 82ND AIRBORNE (RIGHT) AND A GLIDER PILOT, 6 JUNE 1944 (LEFT)

(**1**) M1941 field jacket. (**2**) M1 helmet. (**3**) Above, .30cal M1 carbine: below, .30cal M1A1 carbine with folding metal stock. (**4**) Infantry boots, and (**5**) infantry leggings, with 17 eyelets. (**6**) Tent shelter half, with poles and pegs. (**7**) M1911 A1 Colt .45cal pistol, plus M1916 pattern leather (belt) holster. (**8**) M4-10-6 Lightweight Service Gas Mask, with carrying bag, and waterproofing kit and demister (below). (**9**) M1928 haversack. (**10**) 82nd Airborne Division shoulder patch. (**11**) Compass pouch for belt attachment, and (**12**) compass. (**13**) USAAF shoulder patch. (**14**) M1910 pickmattock: head, handle and cover. (**15**) M1910 hand axe, with cover. (**16**) M1936 wire-cutters and pouch. (Mike Chappell © Osprey Publishing Ltd)

US paratroopers jump from their Douglas C-47 Skytrains on 10 July 1943. (Getty Images)

The parachute consists of several components: the metal-framed canvas backpack and webbed canvas body harness; the webbed canvas static line, ripcord and deployment bag; the silken shrouds attached to canvas risers, which connect to the harness; the shroud lines; and the parachute canopy. The paratrooper's 'chute is worn on his back, unlike a pilot's emergency 'chute, which is sat upon by the user.

The parachute harness can be visualized as an 'X' and provides a canvas saddle for the paratrooper. The shoulder straps extend from the backpack over each shoulder and continue down the front, looping around the back of the paratrooper's hips. The saddle is formed by the two straps that cross the parachutist's posterior. The straps come up between the legs at the upper thigh, connecting to the backpack at just below waist height, which explains why harnesses of this type are sometimes called 'nutcrackers'. Shoulder and thigh straps meet in a connector strap and lock-hook at sternum level across the chest. A bellyband, which is connected to the backpack, goes around the front of the paratrooper and buckles like a large belt on his left side.

The reserve 'chute fastens onto the bellyband horizontally across the paratrooper's stomach, and is deployed by a handle. All harnesses have adjustable belts and fixed tension buckles. Risers attach to the harness and feed into the packed parachutes. Two risers on each side connect to the harness near the paratrooper's shoulder. The top of the backpack is attached to the static line, becoming the deployment bag that rips off with the line when the paratrooper jumps.

Each panel of the parachute is reinforced with three diagonal silken cord braces. When a 'chute rips, reinforcement stops the split from continuing all the way up. A parachute suspension line cord (often called shroud lines by contemporaries) reinforces the edges of the 'chute. A total of 28 shroud lines connect the outer edges of the parachute to the risers. Each silken shroud is a woven silken sheath $^{3}/_{16}$ of an inch (4.7mm) in diameter and surrounds a group of eight to 12 smaller silken cords, which are bundled inside for additional strength.

Shroud lines are evenly divided so that each of the four web risers has the same number of shrouds attached to it. Each riser connects to seven shroud lines. Web risers connect to the harness. There are two risers, which are arranged in a 'V' on each side of the parachutist's body. By pulling the risers, paratroopers can control the rate and direction of descent.

When the parachute is packed for use, only the body harness, the 15ft (4.5m)-long static line and ripcord, and the backpack are visible. The canvas risers are folded first, then the shrouds are gathered and carefully combed (the lines are separated to avoid them tangling), and finally the 'chute canopy is folded and packed on top of the risers and shrouds. Once packed, the parachute backpack is laced up with ripcord lace. The laces are connected to the ripcord, which is connected to the static line. The static line is made from canvas web material and has a metal safety hook fastener on the end. This fastener hooks over a head-height, pencil-thick steel cable that runs the length of the aircraft's cargo bay. When a paratrooper de-planes, the static line pays out its length of 15 feet (4.5m), and then jerks the ripcord, ripping the laces free to allow the deployment bag, 'chute, shrouds, and risers to pay out in the reverse order from which they were packed. After three seconds, the jumping paratrooper is below and behind the aircraft. When the 'chute opens, the paratrooper gets a huge jolt, but once deployed, descent slows to a more gentle float, providing the 'chute remains filled with air. The initial and violent jerk snaps teeth together and jolts the body of the jumper, digging the harness up into his crotch as his descent is arrested.

The paratrooper controls the direction and speed of his descent by spilling air from his 'chute. To spill air, he pulls on the appropriate riser. Sometimes parachutes fail to deploy properly, or the shrouds become tangled, or another paratrooper lands on the canopy and collapses it. Unless the paratrooper manages to fill his 'chute again, or deploy his reserve 'chute, he becomes a 'streamer'. Usually this is fatal, although a small handful of men have survived plummeting to earth.

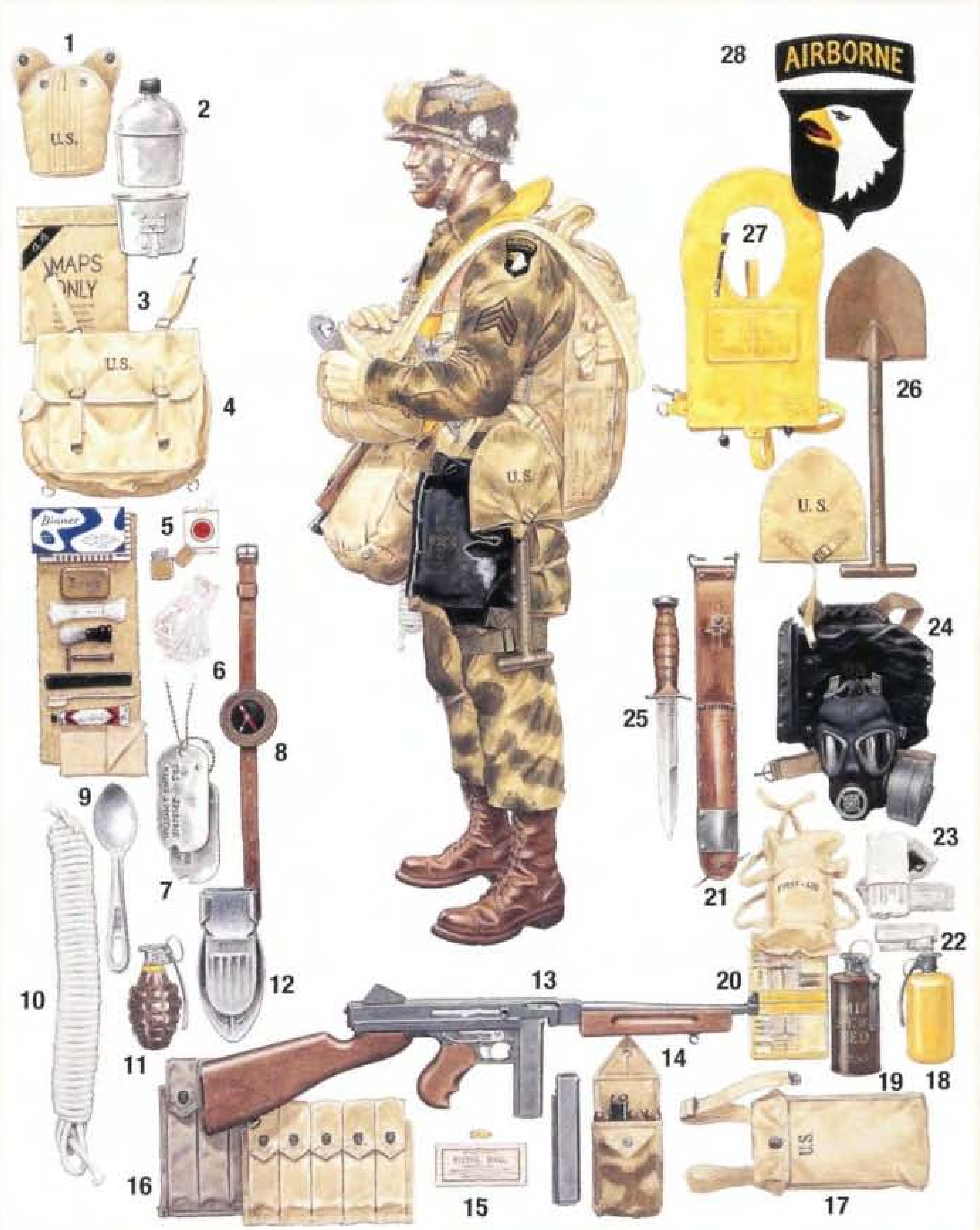
Paratrooper uniforms

The first paratrooper uniform of significance was the 1942-style lightweight tan jump suit. This uniform consisted of a blouse with slanted breast pockets and expanding thigh pockets, a built-in belt, a special zippered neck pocket for the shroud-cutter switchblade, a concealed zipper, and double wrist buttons to adjust the cuffs of the sleeves. The jacket pockets were slanted down and toward the centre of the jacket to give paratroopers better access while in a parachute harness or disengaging from the harness. The jump suit trousers, which had cargo thigh pockets, were of the same tan lightweight material as the jacket. This uniform saw service in Africa, Italy and France. Many paratroopers on D-Day recalled that their uniforms were impregnated with a smelly chemical that was supposed to make them impervious to gas attack.

The 1942-style uniform was replaced by the 1943-issue. This heavier, darker green uniform was worn at Arnhem and Nijmegen. The 1943-issue was made from the same material as the regular army's fatigues and fatigue jackets, differing only in that the airborne issue had cargo pockets on pants and jacket. Field jackets had a built-in drawstring around the waist in lieu of a belt, and had straight breast pockets. Because of its colour and thickness, this uniform was better suited for Europe than the earlier issue.

By the time of the jump at Operation *Market Garden*, all US paratroopers were wearing the 1943-style uniform. Many paratroopers had updated their uniforms when they were shipped back to England to train for *Market Garden*.

In his *History of the 508th Parachute Infantry*, William G. Lord II notes that, in addition to regular gear and weapons, many men of the 508th carried extra items in their voluminous pockets: 'one complete K ration, consisting of three meals, several D ration



SERGEANT, 506TH PIR, 101ST AIRBORNE, 5 JUNE 1944

(**1**) World War II manufactured M1910 pattern canteen cover. (**2**) M1942 aluminium canteen, and M1942 pattern cup. (**3**) Map pouch containing a map of the Normandy coastline, a compass and a small saw blade. (**4**) M1936 'musette' field bag. (**5**) Cigarettes, Zippo lighter; ration packs, soap, laces, shaving brush, razor, comb, toothbrush and toothpaste, bath towel and handkerchief. (**6**) French currency. (**7**) 1943 identification ('dog') tags and chain. (**8**) Wrist-worn compass, with leather strap. (**9**) Spoon. (**10**) First pattern parachutist's rope coil. (**11**) Mk II A1 fragmentation grenade. (**12**) Cricket; the 'double-click' sound was used for attracting the attention of fellow airborne troops at night or in poor visibility. (**13**) M1A1 Thompson sub-machine-gun, with 30-round magazine below. (**14**) A 20-round Thompson magazine pouch. (**15**) Carton of .45 ammo, and single round. (**16**) 3x 30-round and 5x 20-round .45 magazine pouches. (**17**) 30-round .45 magazine bag with strap. (**18**) M15 white phosphorous smoke grenade. (**19**) M18 coloured smoke grenade. (**20**) Survival kit. (**21**) First-aid pouch. (**22**) Morphine solution and syrette. (**23**) Field dressing and tourniquet. (**24**) M5 black gas mask, and M7 black rubberized canvas carrying bag. (**25**) M3 trench knife and M6 scabbard. (**26**) M1910 entrenching tool and cloth cover. (**27**) B4 ('Mae West') life jacket. (**28**) 101st Airborne Division shoulder patch.
(Mike Chappell © Osprey Publishing Ltd)

chocolate bars, two fragmentation grenades, one smoke grenade, one anti-tank Gammon grenade, and other articles' could apparently be stowed in a paratrooper's pockets. The aeroplanes were as heavily laden as the men, and Lord notes that each C-47 carried 'six bundles containing light machine-guns, mortars, ammunition and mines. These were to be released by the jumpmaster just before he jumped.'

The earliest glider infantry, prior to World War II, wore the World War I issue 'dish'. Paratroopers, meanwhile, wore the cloth aviator's helmet to which goggles could be attached using snaps around the crown. After the aviator's helmet was discontinued, paratroopers used American football helmets, but the low rear neck and long ear protection were inefficient. Eventually, the paratroopers settled on the standard US Army 'turtle' helmet, with only a chin-strap modification – the standard chin strap was replaced with an 'A'-style chin strap and moulded chin cup.

Perhaps the most distinctive paratrooper equipment (besides the parachute) was a pair of Corcoran jump boots. Jump boots had high tops, reinforced toes and heels, and were laced up tightly to provide ankle support for the jumper.

A paratrooper was issued a compass, which was worn on the upper arm or as a wristwatch. He also had a shroud cutter switchblade to help him slice through entangling shrouds if he was caught in a tree. Shoulder arms were issued and, as with the US cavalry of the 1900s, early paratroopers were issued with pistols as sidearms. However, with units rapidly growing in size, by 1943 only 2,110 men of a division were armed with pistols.

Pathfinders and glider infantry

Pathfinders were issued panel markers in bags so they could mark DZs in daylight. Special smoke grenades, Very pistols that fired coloured flares, and radio transmitters that emitted a homing beacon for approaching aircraft to lock onto were also issued.

Glider infantry, or 'Glider Riders' as they were popularly known, wore standard infantry equipment, including leggings. They did not receive jump pay and, unlike paratroopers, their fatigues and helmets were standard issue. They had regular infantry (not 'A-style') chin straps and did not use rifle bags (because they shouldered their rifles when they boarded a glider). At one time the rule of five jumps was relaxed so men could qualify for jump boots. This change did not meet with universal approval, and one airborne company wag, who had no doubt worked hard to earn his jump boots, put a notice on a bulletin board stating that if anyone made one glider landing, he qualified to wear leggings.

Weapons

Paratroopers were issued with a number of weapons. The M1 Garand, a clip-fed .30-06cal semi-automatic rifle measuring $43^{1}/_{2}$in (111cm), weighs $9^{1}/_{2}$lb (4.3kg), has an effective range of 601yd (550m), holds eight rounds in an internal magazine fed by a charger clip, and fires as fast as the trigger can be pulled. The M1 features a bayonet lug under the barrel and has a metal butt plate. The M1 carbine was semi-automatic only, and it was replaced by the M2 carbine in 1942. The M2 is shorter than the M1 rifle – only $35^{1}/_{2}$in (90cm) in length – weighs $5^{1}/_{2}$lb (2.5kg), and has a range of 327yd (300m). The M2 was standardized in 1944 and saw limited use. It has a bayonet lug under the barrel and comes in either a full wooden stock version, or as the M1A1 (popularly known as the paratrooper version). This version, which is fitted with a folding 'skeleton' tubular shoulder stock behind the full pistol grip handle, was most frequently issued to airborne engineers or artillery, rather than to airborne infantry.

The Thompson M1 and M1A1 sub-machine-gun is 32in (81cm) in length, weighs 10lb 5oz (4.7kg), and has a range of 109yd (100m). It operates on blowback, firing a .45cal cartridge from a straight 20-round (M1928A1) or 30-round (M1/M1A1 and M1928A1) box magazine, which is located beneath the bolt and behind the forestock. The bolt must be pulled to the rear to charge the weapon, which will then fire in either semi-automatic or full automatic mode, depending on the setting of the gun's selector switch. The M1928A1 has a detachable shoulder stock and a Cutts compensator on the barrel to offset the gun's tendency to climb upwards and to the right. The M1928A1 uses a 20-round box magazine or a 50-round drum magazine, which is heavy but tends to disengage because of its weight. However, by the middle of World War II, the M1 Thompson commonly used a 30-round straight magazine, had no Cutts compensator, and had a firmly attached shoulder stock.

The M3 and M3A1 'Grease Gun' sub-machine-guns are straight blowback, fully automatic weapons. They measure $29^{1}/_{2}$in (75cm) with their stocks extended, or $22^{1}/_{2}$in (57cm) with them folded. They weigh nearly 8lb (3.6kg). The .45cal cartridges are fed from a 30-round box magazine (not interchangeable with the Thompson) located beneath the bolt. The Grease Gun features a pistol grip and a folding 'L' wire-stock. It fires only fully automatic, and a skilled gunner can fire in two- to three-round bursts. Its effective range is 109yd (100m).

The 1911A1 Colt .45cal semi-automatic pistol fires .45 ACP rounds, measures $8^{3}/_{8}$in (21.8cm) in length, weighs 2lb 7oz (1.1kg), has an effective range of 55yd (50m), and fires a single shot each time the pistol's trigger is pulled. It has a built-in safety grip in the butt grip, a seven-round magazine in the grip, and its slide must be pulled back to charge the first round. When the last round is fired, the slide locks in the open position to indicate the weapon is unloaded.

The Mk II and Mk IIA1 rifle and fragmentation grenade, 'Pineapple', holds 2oz (57g) of TNT, weighs 1lb 5oz (595g), and consists of a fuse tube and grenade body. It can be thrown 33yd (30m), fired 154yd (140m) from a rifle and has an effective blast radius of 11yd (10m). The body is made of 30 square metal segments arranged in six rows of five, and is filled with an explosive charge. This charge causes the body to shatter when the powder explodes, throwing fragments in every direction. The fuse and primer handle are screwed into the body. A safety cotter pin, which holds the firing pin in a cocked position until the pin is pulled, prevents the striker handle from moving. To arm the grenade, the safety cotter pin is removed while holding down the handle. When thrown, the handle is flung away by the motion of the striker. The grenade's striker snaps forward (like a mousetrap) and the fuse primer is ignited, which in turn explodes the powder in the body, causing the grenade to shatter with the explosion. There is a presumed four- to five-second delay between the pin being pulled and the grenade exploding.

The M1 bayonet measures 10in (25.4cm) in length. It clips beneath the barrel of the rifle via a ring, which fits over the rifle barrel. The lower edge of the bayonet is sharp, and the first 5 inches (12.7cm) of the reverse side are also sharpened. It can be used either as a hand-held knife or attached to the barrel of the rifle.

The Browning automatic rifle M1918A2 or BAR is a .30-06cal assault rifle. It measures 48in (122cm), weighs 19lb (8.6kg), and holds a magazine of 20 rounds. The BAR has two rates of automatic fire, 350 or 550 rounds per minute. It is a single-man weapon and has an effective range of 880yd (800m); it can be shoulder-fired, or fixed to a bipod as a light machine-gun. Airborne troops often removed the bipod to reduce weight and bulk.

The Browning .30cal M1919A4 light machine-gun is a tripod or vehicle-mounted machine-gun with a 250-round belt. It measures 41in (104cm), weighs 31lb (14kg), and has an effective range of 990yd (900m). Early versions were liquid-cooled, but soon an air-cooled version became predominant. Generally, the gunner carried the gun and an ammo belt, while his assistant carried the tripod and two boxes of belted ammunition. Early World War II versions had a 250-round cloth belt, but later models used the 100-round disintegrating link belt, which made it possible to link large numbers of belts together. Although this weapon uses automatic fire, good gunners can shoot in three- to five-round bursts.

The Browning M2HB .50cal heavy machine-gun is 57in (145cm) in length, weighs 66lb (30kg), has an effective 1,540yd (1,400m) range and has a carrying handle beneath the barrel. Early versions were water-cooled, but these gave way to air-cooled versions. It uses 100-round web or metal-link disintegrating belts. The .50cal round can penetrate light armour and soft-skinned vehicles, and is suitable for use as an anti-aircraft weapon. Generally this weapon had a two-man crew (gunner and assistant gunner).

The 6cm M1 anti-tank rocket launcher, or bazooka, was designed in 1918, but it was not introduced as a shoulder-fired, breech-loading weapon until mid-1942. The M1 launcher weighed 13$^{1}/_{2}$lb (6kg) and had a tube that was 54in (135cm) long, which was fitted with wooden hand grips and shoulder stock. The weapon was electrically fired by two batteries in the grip, and it had a range of up to 300yd (273m). In the autumn of 1943, the M1A1 began to replace the M1. The M1A1 weighed 13lb (6kg) and had a single handgrip. In October 1943, Airborne Command requested that the M9, which was fired by an impulse magneto in its handle, replace the M1 and M1A1. The M9's 5ft (1.6m) barrel could be broken into two sections while it was being carried or during parachute jumps The M9 had a 600yd (545m) range, a single pistol grip, and a metal shoulder rest. The M9A1, which incorporated an improved barrel coupling, soon followed and became the most widely used bazooka model. The 6cm M6-series high explosive anti-tank (HEAT) rockets could penetrate 3in (75mm) of armour at 30 degrees' impact and 4.5in (110mm) at zero degrees.

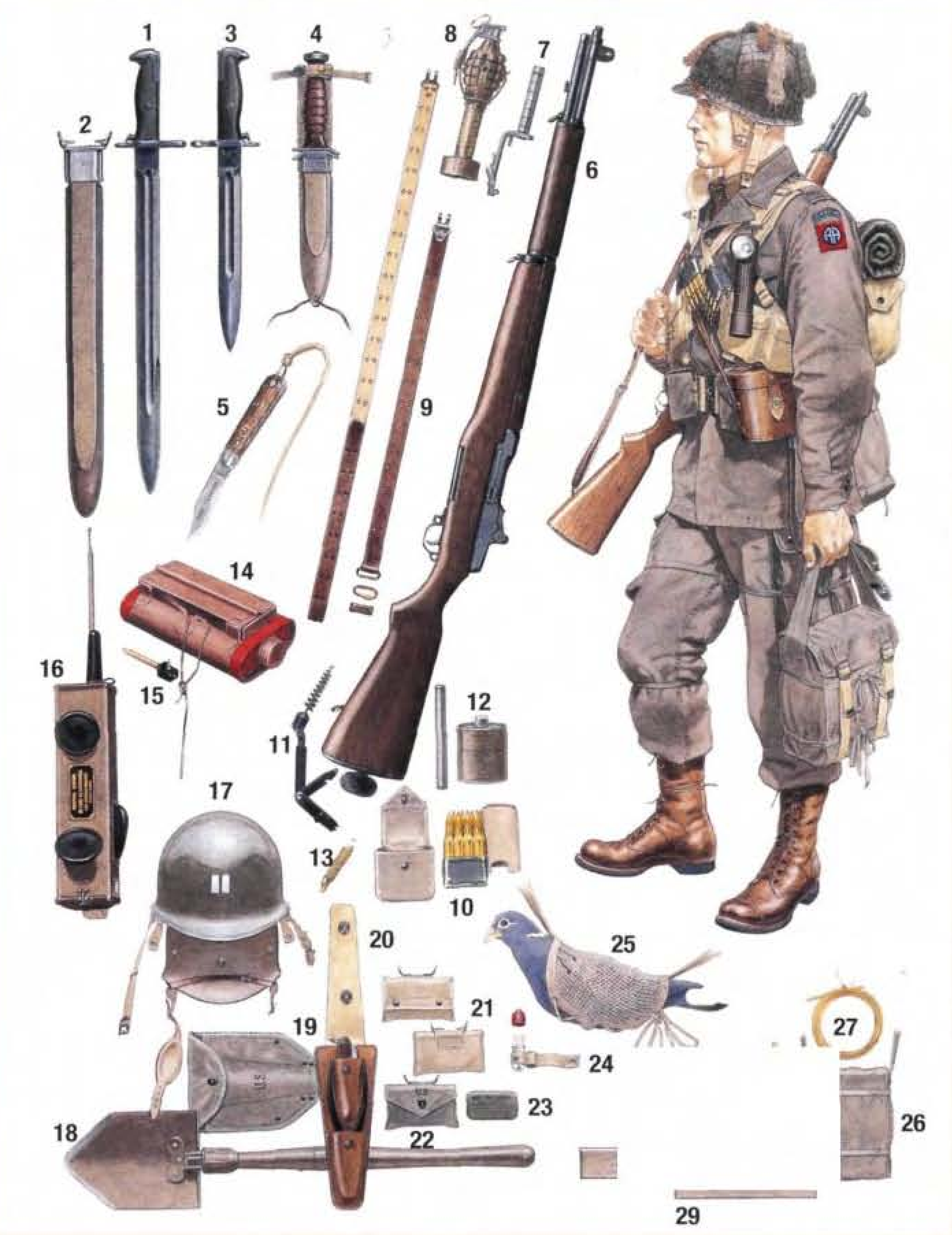
The 6cm bazookas, with a rate of fire of four to five rounds per minute, were the airborne infantryman's principal anti-tank weapons throughout World War II.

The 60mm M2 mortar consists of a tube, folding bipod, base plate (mount M2), and separate round. Muzzle-loaded, mortars could be moved and set up and then fired by dropping the round down the barrel, where it hit a firing pin and discharged. The 60mm mortar fired 3lb (1.4kg) anti-personnel high explosive, 4lb (1.8kg) smoke, or 3.8lb (1.7kg) illumination rounds. Its tube measured 2ft 4$^{1}/_{2}$in (72.5cm) in length, weighed 11lb 8oz (5.2kg), and had an effective range of 2,017yd (1,837m) for high-explosive (HE) rounds, 1,075yd (977m) for illumination rounds, and 1,610yd (1,464m) for smoke rounds. The M2 had a rate of fire of 18 to 20 rounds per minute. Plate, bipod and tube weighed 42lb (19kg) in total.

The 81mm M1 mortar is a smooth-bore, muzzle-loading, high-angle-of-fire weapon. It consists of a tube and base cap (containing the firing pin), bipod and base plate. It weighs

44½lb (20kg) and measures 9ft 9in (3m) in length. It fires light HE, heavy HE, illumination and smoke rounds, whose respective ranges are 3,290yd (2,991m), 2,560yd (2,327m), 2,200yd (2,000m) and 2,431yd (2,210m). A standard light HE round weighs 7lb 4oz (3.3kg). The Ml has a rate of fire of 18 rounds per minute.

The 57mm M1 and M2 anti-tank gun is a light, mobile, direct-fire infantry AT weapon. It is breechlock-loaded, has a vertical sliding wedge breechlock, and is capable of penetrating



DEMOLITION PLATOON PARATROOPER, 82ND AIRBORNE: OPERATION *MARKET GARDEN*.

(**1**) M1942 bayonet, long (16in) with (**2**) scabbard; (**3**) standard 10in version. (**4**) M8 scabbard, with M3 trench knife inside, usually attached to the lower leg. (**5**) M2 pocket knife (switchblade), with cord. (**6**) .30 M1 Garand rifle: (**7**) M7 grenade launcher, for Garand rifle. (**8**) M1A2 rifle grenade adapter. (**9**) Garand carrying strap. (**10**) 8-round clip for M1 rifle, with ammo pouch. (**11**) M1 Garand cleaning and maintenance tool. (**12**) Oil bottle and grease bottle, and (**13**) pull-through cord, for rifle maintenance. (**14**) Hawkins ATK Light Anti-Tank Mine Mk II: (**15**) igniter. (**16**) BC-611 walkie talkie. (**17**) M1 C helmet, with liner; this replaced the earlier M2 helmet. (**18**) M1943 entrenching tool and (**19**) cloth cover. (**20**) CS-34 leather Signal Corps pouch, with knife inside. (**21**) M1910 first-aid pouch for web belt, two-studded version, front and rear views. (**22**) M1943 version of first aid pouch. (**23**) Field dressing. (**24**) Pigeon leg capsule, and (**25**) homing-pigeon carrying harness: the Signal Corps used these to convey messages as late as September 1944. (**26**) Type 2 demolition pack (rear view), plus demolition equipment: (**27**) detonator cord; (**28**) time fuse and pull fuse (with ring); (**29**) C2 demolition block and (**30**) TNT blocks.

(Mike Chappell © Osprey Publishing Ltd)

medium armour. The M2 has a caster on its right trail, and features different handspike, utility box, rammer brackets, shield apron hooks, trail handles and spreader than the M1. Mounted on a two-wheel, single-axle carriage, the M2 has a low centre of gravity and weighs 2,700lb (1,225kg). Artillerymen can emplace it in 90 seconds. It fires a 13lb 10oz (6.2kg) APGT round to a range of 13,556yd (12,324m). It can also fire a 12lb 11oz (5.8kg) HE-T round to a range of 12,670yd (11,518m).

The 75mm M1A1 pack howitzer is a carriage-borne, single-shot artillery piece. It has a wedge, horizontal sliding, hand-operated breech. The M1A1 measures 12ft (3.7m) in length and weighs 1,440lb (653kg). It has a range of 9,610yd (8,787m) for HE and WP smoke rounds, and 7,000yd (6,363m) for HEAT rounds. The M1A1 was regarded as a good infantry field piece, having a rate of fire of 140 rounds per hour. Six artillerymen could, when no gun tractor or truck was available, manually pull the M1A1 by the trails over ground. Although the M1A1 is lighter and has a longer range than the 105mm M3, the latter has more punch than the 75mm gun.

The 105mm M3 pack howitzer is a carriage-borne, single-shot artillery piece with a wedge, horizontal sliding, hand-operated breech. At 19ft 8in (6m) in length, it weighs 4,475lb (2,029kg) and has a range of 12,150yd (11,045m) for smoke or HE rounds, and 8,959 yards (8,145m) for HEAT rounds. Hydro-pneumatic recoil and manual operation, plus a 100-round-per-hour rate of fire, make the 105mm M3 an ideal infantry support weapon. A snub-nosed version, which was delivered by glider, has a shorter range than the 75mm gun, but uses a heavier shell that compensates in hitting power. When glider troops land, the regular barrel 105mm guns are brought in to reinforce the paratroop artillery units.

Airborne units in combat

The pathfinder

The pathfinder went ahead and found the way for those who followed. Pathfinders had to make the DZ visible to the paratroop and glider units that followed them on a mission, but, while doing this, they had to remain hidden from the enemy. To help them in their task, pathfinders were issued with four essential pieces of equipment: low-tech ground identification panels (which were large, coloured sheets of fabric carried in a self-contained OD bag); high-tech Krypton lights; 5G radio transmitters; and Eureka radar devices to help aircraft locate landing sites. In Sicily, the 5Gs were not used. In transit one of the 5Gs had broken loose and smashed; consequently, the pathfinders had little faith in them and so did not use them. The Eureka radar sets were operational within three minutes. As a back-up, pathfinders had coloured flares, which were fired from Very pistols, to identify general areas for approaching aircraft. In daylight, pilots would see the ground panels marking the DZ.

Once landed, the pathfinder hid his parachute, assembled his gear and weapon, and moved to the DZ. In Sicily, two of three pathfinder groups dropped on target. On D-Day, many pathfinders dropped in flooded fields, were captured, or were well off-course. Nevertheless, the efforts of those in the right place helped harried troop carrier pilots locate their DZs.

Paratroopers

The most frequent mission directive given to paratroopers was to 'Disrupt enemy communications, delay enemy reinforcements, and accomplish mission.' Paratroopers approached missions with a 'can-do' attitude, but getting to where they were supposed to be was not always easy. Jumping from an aircraft is not necessarily a matter of pinpoint accuracy. On D-Day, things went wrong for many paratroop units, including the 508th. William G. Lord said, 'A quick hopeful glance at the terrain below was enough to tell most of the Regiment that they were not in the proper place, but were lost several miles into enemy territory.'

On the first day's drop over Italy, 'friendly fire' would account for several Allied planes, a number of gliders and many lives lost. The next day, and despite warnings from the top, the same thing happened to paratroopers who were struck by naval gunners who had become nervous from constant Luftwaffe attack. Thereafter, paratroopers approached a DZ tentatively, aware of the perils inherent in their mission. No matter how nonchalant a paratrooper appeared, all were concerned about the jump.

Because of the threat of enemy anti-aircraft fire, some jumpmasters had their men hook up 20–30 miles (32–48km) from the drop zone. This practice meant that, if the plane was hit, the men would still have a chance to jump. Captain Royal Taylor of the 508th Parachute Infantry Regiment had his men hook up when they reached the English Channel.

More than one paratrooper spoke of how agonizing it felt to stand, poised in the doorway, as tracer rounds zipped nearby. It was almost as helpless a feeling as that experienced by the soldier as he floated down under enemy fire, with only a disassembled and unloaded weapon to protect himself.

On the ground, the paratrooper had to assemble his weapon, locate other members of his stick, orient himself and then fulfil his mission. The compass was now his most important piece of equipment. Paratroopers had to move unseen, treating everyone as a direct information conduit to the enemy. Moving quickly but stealthily, the paratrooper kept his head down and his rifle ready. With luck, an officer or NCO would be moving toward him, collecting members of the unit so that they could complete their mission. Wallace Swanson of the 502nd Parachute Infantry Regiment recalled his landing for Gerald Astor: 'I landed in three or four inches of water covering a grassy area. My 'chute collapsed. I collected it and hid it.'

Landing at D-Day, 1st Lieutenant Barry E. Albright of Company E, 508th Parachute Infantry Regiment, recalled his experiences: 'A burp gun was firing from the far hedgerow … It took … 20 minutes to work myself out of my 'chute.' Albright added, 'It was quite clear that we could not assemble and secure our equipment as planned … [so] I figured the direction most likely to lead to the battalion defensive area. At five in the morning I found the Battalion CP.' Some paratroopers landed and acted with caution, while others displayed bravado. During the Battle of the Bulge, when told his unit was cut off and surrounded by superior German forces, one paratrooper quipped, 'The Germans have us surrounded – the poor bastards!'

There were instances during World War II when paratroopers fought as regular infantry (i.e., without having first been dropped into battle, or participated in an amphibious landing); however, this was not the norm. The advantage of a sea landing was that equipment and supplies were more likely to reach the area where they were needed. In the case of an airdrop, it was not uncommon for supplies to be lost and never found.

Like all dropped supplies, medical supplies were at the whim of wind and man. Corporal George Moore of 3rd Battalion/508th was at an aid station and observed a badly wounded soldier. 'There was no plasma or morphine,' recounted Moore. The soldier whose legs were badly injured cried out, 'Oh God, please let me die …'. Paratroopers were taught basic first aid and many carried extra compresses on their helmets. A compress was placed over a wound, sterile side down, and pressure applied to stop or slow the bleeding. The paratrooper then yelled for a medic and continued his mission.

The wounded were patched up where possible, or evacuated if their injuries were serious. Some wounded were captured, patched up and then sent to POW camps. Others were taken to the rear by medics, loaded on boats or infantry landing ships (LSIs) and returned to England to convalesce. When healed, paratroopers were either returned home for discharge, or sent back to their unit's depot so they could rejoin it.

Once free of his parachute, the paratrooper pulled his MI from its Griswold bag, assembled it, and then loaded it. Those jumping with MI carbines clipped the stock open, slammed a magazine in the weapon, and charged it. Some men using magazine-fed weapons (e.g. the Thompson) taped two magazines together. That way, if surprised while struggling out of his gear, the paratrooper had 40 rounds that he could quick-load and fire.

Over Ste Mère-Église, Captain Royal Taylor released parapacks of the 508th's equipment and jumped. Taylor was slightly injured on landing, and quite a few paratroopers (from a mix of units) landed in trees, or on telephone poles. A few dropped very low, while some were so heavily laden with items in their pockets that, when their 'chutes opened, their pocket seams ripped open and items were lost. A few jumpers drifted helplessly into burning buildings, their ammunition and grenades exploding in the flames. Ground forces shot down men who descended over German positions and many paratroopers saw friends killed as they dangled like targets in their harnesses. Paratroopers who survived learned, and in the daylight drop in the Arnhem-Nijmegen-Eindhoven campaign, they jumped with loaded weapons so they could come down blazing.

US paratroopers attached to the static line just prior to jumping during the invasion of Normandy. (Time & Life Pictures / Getty Images)

US paratroopers smile while sitting along the sides of an air cargo plane on their way to Sicily. (Getty Images)

Inevitably, on D-Day, men were a mélange from different units, all with separate missions and each trying to find other members of their units. In the darkness, men mistook each other, lost maps and valuable equipment in flooded fields, and became disoriented. For a unit to land together, they had to jump in close proximity; nobody could hesitate at the door; they had to avoid anti-aircraft and ground fire; and the pilot had to maintain a steady course. The potential for chaos was immense.

Tired from hours of waiting and the stress of the jump, some paratroopers froze when they hit the ground. S. L. A. Marshall, who was trapped in hedgerows by German fire on D-Day, recounts that 1st Lieutenant Woodrow Millsap of the 508th told his men, 'Keep moving till we close on them. Hold your fire till I give the word.' The men followed until a German machine-gun opened fire but, startled by enemy fire, his men went to ground. Seeing enemy fire kicking up dirt, Millsap bulled his way through the hedgerow, shouting for his men to follow. No one did. They weren't terrified, just tired and under stress. 'What's the matter … no guts?' he yelled. No one budged until another officer came along and helped Millsap move them out.

On D-Day, landings were unpredictable, often putting mismatched groups of men in proximity. General Maxwell Taylor landed in an area where several men gathered, most of them officers and only two or three enlisted men. Recalling the incident for Cornelius Ryan, he quipped, 'Never have so few been commanded by so many.'

Glider troopers

If jumping from an aircraft required courage so too did crash landing in a glider made from plywood and metal. Parachute field artillery and glider field artillery units had to crash land in enemy territory, which was often bestrewn with potentially lethal telephone poles, before assembling their personnel and weapons, including their field piece. Vic Warriner told Gerald Astor of his glider's landing on D-Day: 'The crash was only minimal. The Plexiglas stopped falling ... and all I got out of the experience was skinned knees.'

In theory, glider artillerymen clambered out of their gliders and immediately set up their guns. However, in practice, they would often have to spend valuable time locating their weapon before they could do anything. Taking a 75mm howitzer's components out of parapacks and putting the pieces together was simple, unless of course the parapacks were lost. Once the field piece had been assembled, men then had to find rounds for the gun. With gun and ammunition ready for action, the gun crew had to orient itself and move to a designated support position.

Glider artillerymen were also hit hard if their cargo tore loose en route. After D-Day, more than one glider was found with its crew dead, having been crushed by vehicles and cargo upon impact.

On the ground

Paratroop landings are frequently chaotic. During World War II, many pilots dropped their men low. According to some paratroopers, the planes delivering the 508th were as low as 500ft (152m) off the ground. Jump time was cut down to three seconds for the 'chute to open and five or six seconds until touch down. Men were scattered over dozens of hedgerows. 1st Lieutenant Carl Smith recalled:

> I think we jumped at what seemed like 800 feet. It was low. In the dark, I could see lights and both small-arm and anti-aircraft fire before I touched down. I landed in a tree that was in a field surrounded by hedgerows and I had a time trying to get my knife out to cut my risers. When they parted, I fell about 20 feet, and a rotten log broke my fall. Once out of the hedgerow, I couldn't locate my men. I kept moving from hedgerow to hedgerow. I linked up with a sergeant from another unit, and we spent most of the day moving toward our objective where we heard firing. Toward the end of the day he was killed by enemy fire. That evening I made contact with the rest of the 508th.

Staff Sergeant Harrison Summers of Company B, 502nd Parachute Infantry Regiment, with the 101st landed near St Martin-de-Varreville. His mission was Objective W, where there were four 122mm anti-aircraft guns in bunkers. Objective W was within 1 mile of Mésières , west of St Martin-de-Varreville. An 11-building farm complex (known as XYZ Complex) provided lodgings for the German anti-aircraft batteries, and this became the immediate objective for Staff Sergeant Summers' hotchpotch platoon. Summers' troops had been assembled from other units and, somewhat predictably, the men did not work well together. The men were reluctant to assault the objective, so Summers decided to lead by example, taking on the first of the 11 farmhouses alone.

Summers found himself backed by several of his troops for the second assault, and he methodically attacked each farmhouse in order. At building 11 (which was occupied by 80 German soldiers), Staff Sergeant Roy Nickrent came forward with a bazooka and put several rockets into the upper storey and roof. Faced with Nickrent's bazooka and Summers' steady advance, the Germans abandoned the building and fled. Well before supper, Summers had cleared all the buildings, routing over 100 German anti-aircraft troops and killing 20 of them.

Troops of the 325th Glider Infantry prepare to board Horsa gliders at an airfield in England. The US airborne units were provided with the British Horsa gliders to carry larger loads than the Waco CG-4.

Wearily, Summers sat and smoked a cigarette after taking building 11. When asked why he had staged his one-man combat assault, he drew on his cigarette and replied, 'I have no idea why I did that ... I wouldn't do it again under the same circumstances.' Perhaps it had been the instinctive act of a courageous man, or perhaps it had been the product of intense and specialized training. The important thing, however, was that the mission had been accomplished.

Company B of the 508th Parachute Infantry Regiment was an average unit with an average story to tell. They jumped into Europe at strength. However, when they left, their day report showed 148 officers, NCOs and enlisted men accounted for by 9 July 1944. The report shows that 18 were KIA (killed in action, 12 per cent), 24 were MIA (missing in action, 16 per cent), 48 were WE (wounded-evacuated, 33 per cent), 47 (33 per cent) present, and 11 (six per cent) were transferred. Two of the unit's sergeants received battlefield commissions to lieutenant. The casualty rate for D-Day to D+35 included KIA, MIA and WE, but at 61 per cent manpower loss (Eisenhower had anticipated losing 85 per cent or even 100 per cent), the airborne's mission was a success.

During the Sicilian campaign, General Ridgway's men were scattered all over the map, far from the DZ. Ridgway was determined to find them and decided to assess the situation firsthand. He took what he described as 'the loneliest walk' of his life, walking toward where he thought his men should have landed. Ridgway moved into enemy territory and gathered together 20 men, all of whom were disoriented and confused. Ridgway was so upset by the scattering of his men that he returned to American lines and advised General Patton to cancel a planned drop of the 504th.

General Gavin was among the missing during the Sicilian campaign. He had landed more than 25 miles away from the DZ and found himself among only 20 men, many of whom (including his S-1 and S-3) were injured. After much contemplation, Gavin decided to start moving toward the sound of the guns. All but six men fell out. Crossing a ridgeline they came under enemy fire, which downed one man. Gavin's men returned fire, but their carbines jammed. As the volume of enemy fire intensified, Gavin realized that his five men were up against a platoon. They withdrew during an enemy mortar barrage.

While hiding in a ditch Gavin fumed about jammed weapons, and about the scattering of his carefully trained men. He felt helpless. On the second day he encountered a friendly outpost and learned that he was still 15 miles (24km) off course. As they crossed through German lines on their way to safety, Gavin's men followed standard paratrooper practice and cut telephone lines to disrupt enemy communications.

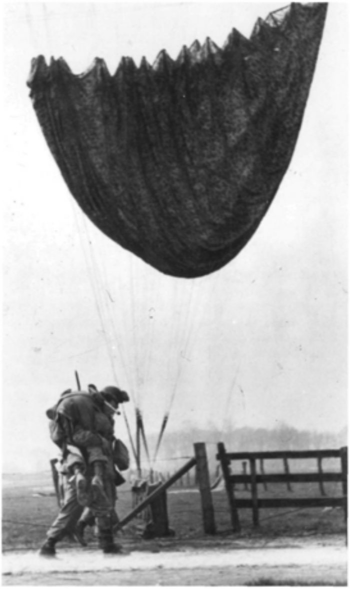
In similarly chaotic circumstances, General Gavin arrived at Biazza Ridge. However, this time he found around 250 US paratroops from the 3rd Battalion and quickly assembled them into an ad hoc unit to hold positions and fight German probing units in the area. Gavin's unit achieved great success and forced enemy probes back. The Germans responded in emphatic fashion, sending an armoured column against the paratroopers.

The 505th Parachute Infantry Regiment was on its own, and some of the heaviest fighting of the Sicilian campaign ensued. Lightly armed paratroopers with bazookas and squad weapons held the ridge line tenaciously. Mortar fire began working down the line of paratroopers who were furiously digging in. The paratroopers fired their bazookas on German tanks at close range, but saw their projectiles bounce off. The tanks quickly began to overrun the 505th's shallow foxholes. The paratroopers did enjoy some success against the German tanks by firing their bazookas into the tank's soft underbelly, which was exposed when it cleared small elevations. However, squad weapons against armoured fighting vehicles is an uneven match.

Despite their lack of firepower, Gavin was determined that his men should hold their ground. He told the 505th unit commander that they 'were going to stay ... [on] the ridge with what we had and fight the German infantry that came with the tanks'. The 505th held Biazza Ridge and were soon supported by a battalion of the 45th Infantry Division. Back-up continued to arrive, this time in the shape of the 456th Parachute Artillery's 75mm howitzers. With a few pulled strings, naval fire from cruisers and destroyers against the German positions was also forthcoming.

As naval salvos started blowing up fields, Gavin felt that the tone of the battle 'seemed to change'. The ferocity of the German attacks lessened and Gavin realized that it was the perfect time for a German counter-attack. He rounded up his men, much as Patton would do at Bulge, armed them, and charged down the hill into German lines. It was the last thing that the Germans expected and they were routed.

A paratrooper of the 17th US Airborne Division carries an injured fellow soldier to a first-aid station near Wesel in Germany, during the operation to secure the Rhine crossing. A parachute hangs from a telegraph wire overhead. (Getty Images)



Ridgway felt that this was the turning point in the campaign for Sicily. For his actions, General James Gavin was awarded a Distinguished Service Cross. Other men fought no less heroically. In *Currahee*, Donald R. Burgett tells of an American lieutenant who started across a field when bullets began spurting in the dust around his feet. The lieutenant returned to where his 17 men lay and told them, 'This town is a German fortress ... you can see catwalks in the treetops.' When asked what his plan was, he responded, 'A head-on attack, and the sooner the better.' After a hard fight, the Germans began withdrawing. Upon taking the town, the Americans learned from a prisoner that over 200 Germans had been positioned there. When asked why the Germans had pulled out, the prisoner said that they thought 'the whole invasion was directed right at them and never dreamed that only 20 men armed with rifles would attack over 200 well-armed soldiers in stone fortifications'.

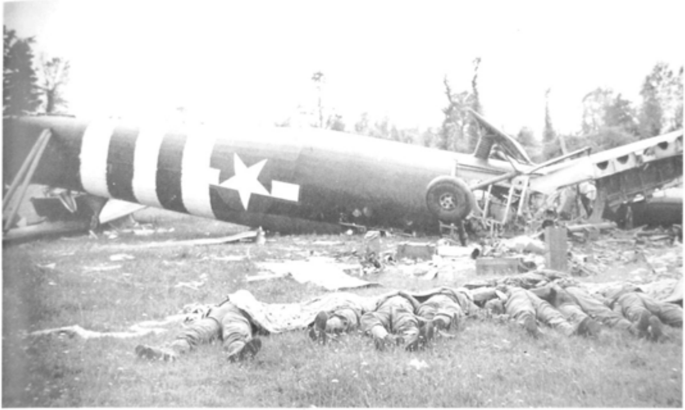
Sometimes, a paratrooper's best course of action was to play dead. As Private John Steele of the 505th Parachute Infantry Regiment floated toward Ste Mère-Église's town square under intense enemy fire, he saw one man go limp in his risers and another explode when munitions he carried were hit. Private Steele was himself hit and, as a numbing pain shot through his foot, he collided with the town church. His 'chute collapsed as he slid down the roof of the church and over its side. Steele came to a halt on the eaves, dangling just above a maelstrom of German soldiers who were firing at the paratroopers. Struggling, he reached for his knife, but it slipped from his fingers. Steele was trapped. He closed his eyes and hung limp, giving the impression of a dead paratrooper hanging from his risers. Several hours later, German soldiers discovered that he was alive, and cut him down.

Gradually units converged on pre-set areas, or were directed to where their unit was re-forming. All this occurred behind enemy lines while ground forces tried to link up with the paratroopers. Paratroopers destroyed communications, controlled vital roads, drained off enemy reserves needed elsewhere and captured key positions such as radio stations, radar emplacements, crossroads or bridges. Although their landings had been far from perfect, they had created chaos for the enemy.

Sometimes paratroopers fought as line infantry. When the German Ardennes offensive caught the Allies by surprise, troops dug in and toughed it out. Fortunately for the Allies, American paratroopers met some of the offensive. These men, who had been trained to fight far from support, were confident and self-assured. As the 101st stood surrounded at Bastogne, General MacAuliffe famously replied, 'Nuts!' to a German demand for surrender.

Meanwhile the 82nd drew a line about 12 miles (19km) behind Bastogne and 5 miles (8km) in front of Malmedy. US armour was moving heavily through the snow, in an effort to stop the oncoming German Panzers. Gerald Devlin recounts an incident at Manhay when an armoured column saw a paratrooper bazooka crew manning a snow-covered bunker. 'Where are the American lines?' the commander yelled to the gunner. Private First Class Thomas Martin of the 325th Glider Infantry Regiment (of the 82nd) stood and indicated the area behind him. 'Pull your tank up behind me,' said Martin. 'I'm the 82nd Airborne Division, and this is as far as the bastards are going.'

It was not only airborne foot soldiers, but also commanders that were given to flirting with danger. General Ridgway, for example, had a reputation for hopping in his jeep, having his driver go forward, and then getting out to take a look around. In his jeep he carried his .30-06 Springfield rifle as a personal weapon, which he kept loaded with armour-piercing ammunition.



The inherent dangers of glider transport took their share of lives; here dead troopers of the US 101st Airborne Division lie by a flipped-over Waco CG-4A. Gliders could be wrecked on landing by natural or man-made obstacles, or by flipping if the wheels jammed into soft ground (many gliders jettisoned their take-off wheels and landed on skids).

On one such jaunt, at Bulge, Ridgway got out of the jeep and took off through the snowy woods with no support. Clay Blair relates that Ridgway 'heard a tremendous clatter' between him and his jeep. He turned to see a German AFV crossing the area that he had just moved through. Ridgway began shooting and sent five shots through the side of the AFV. He aimed roughly at the markings on the side of the vehicle, which quickly swerved and ground to a halt. Tensely, Ridgway waited for the enemy crew to fire or attempt to capture him. Nothing happened. He waited for a moment, and then approached. The crew inside was dead.

Ridgway, Gavin, Taylor and many others exhibited the airborne's famous can-do attitude and the belief that the mission was all-important. The legacy of the airborne's service and determination has defined the attitude of the men who train today's United States armed forces. The difficult they did at once. The impossible took a little longer. These were the men who flew to war and walked home.

D-DAY 1944

Steven J. Zaloga

The strategic background

Opposite
On the way to Utah Beach. Task Force U sets sail for Normandy on 5 June with a flotilla of LCI (landing craft, infantry) ahead, as seen from the bridge of an LST (landing ship, tank).

Allied planning for Operation *Overlord* recognized the need for extensive port facilities to supply the armies for later operations in France. The German Army presumed that the Allies would conduct their invasion in the Pas de Calais where there were many excellent ports. Consequently, the main German defensive effort was concentrated in this area, making it far less attractive to Allied planners, who turned instead to Brittany and Normandy. Brittany had several excellent ports such as Brest, but the Breton peninsula was more distant from English ports than either the Pas de Calais or Normandy. In addition, had the Allies landed in Brittany, German forces might have contained their advance by sealing off the relatively narrow exit from the Breton peninsula. As a result, Brittany was dropped from consideration. The Normandy coast had few large port facilities except for Cherbourg on the Cotentin peninsula. Nevertheless, Normandy was attractive for many other reasons including its proximity to the English Channel ports, and the relatively weak German defences in the region, especially in mid-1943 when Allied planning started in earnest. A two-step solution was found to the problem of port facilities. In the short term, the Allies would rely on the creation of a pair of artificial harbours that would be located at the landing beaches. The next objective would be to seize suitable port facilities. This was a task assigned to the US Army: first, the seizure of Cherbourg and then the Breton ports. Utah Beach was selected with this objective in mind. It was the westernmost of the five D-Day landing beaches, at the base of the Cotentin peninsula, offering the best access toward Cherbourg.

German defence of the Cotentin peninsula was based on the mistaken assessment that the main Allied effort would be against the Pas de Calais. As a result, German defensive efforts in 1943 concentrated on creating the 'Atlantic Wall' along this stretch of coastline. The Allied landings in Italy in 1943–44, particularly the Anzio landing in January 1944, convinced senior German commanders that the Allies would land in more than one location, using smaller landings to draw off German reserves and weaken the main defences. As a result, the German strategy was to deploy second-rate units behind mediocre

CHRONOLOGY

1943

July	First draft of *Overlord* plan completed.
3 November	Führer Directive 51 directs priority to reinforcing Western Front.
6 November	Rommel appointed to lead Army Group for Special Employment.

1944

1 February	Operation *Neptune* plan adds Utah Beach to the *Overlord* operation.
28 May	Landing zone for 82nd Airborne Division shifted from St Sauveur to Merderet River.
3 June	OSS teams drop into Normandy to set up beacons for pathfinders.
4 June	Luftwaffe meteorologist forecasts rough seas and gale-force winds through mid-June.
5 June	Eisenhower decides that break in weather will permit execution of *Neptune* on 6 June 1944.

D-DAY, TUESDAY 6 JUNE 1944

00.15hrs	Pathfinders begin landing in Normandy to set up beacons for air drops.
01.30hrs	*Albany* mission begins and 101st Airborne paratroopers start landing in Normandy.
02.30hrs	*Boston* mission begins and 82nd Airborne paratroopers start landing in Normandy.
02.30hrs	Task Force U arrives off Utah Beach, anchors in transport area.
03.10hrs	General Marcks begins to move Kampfgruppe 'Meyer' to counter paratroop drops.
04.00hrs	*Chicago* mission begins and 101st Airborne gliders start landing.
04.07hrs	*Detroit* mission begins and 82nd Airborne gliders start landing.
04.30hrs	Cavalry detachment lands on St Marcouf Island off Utah Beach, finds it deserted.
05.05hrs	German coastal batteries begin engaging Allied warships.
05.50hrs	Preliminary naval bombardment of Utah Beach begin.
06.05hrs	Bomber attacks on Utah Beach begin.
06.30hrs	Assault waves begin landing on Utah Beach.
09.00hrs	Combat Team 8 (CT8) begins moving off Utah Beach via Exit 2.
21.00	*Elmira* mission delivers glider reinforcements to LZ W; *Keokuk* to LZ E.

POST-D-DAY

7 June	*Galveston* mission delivers gliders to LZ W at 07.00hrs; *Hackensack* at 09.00hrs.
7 June	German counter-attack on Ste Mère-Église repulsed with tank support.
8 June	Rommel receives set of captured VII Corps orders, decides to reinforce Cotentin peninsula.
9 June	La Fière causeway finally captured by 82nd Airborne Division.
10 June	101st Airborne seizes causeway leading to Carentan.
10 June	90th Division begins attempt to cut off Cotentin peninsula.
11 June	6th Fallschirmjäger Regiment (FJR 6) retreats from Carentan.
12 June	101st Airborne occupies Carentan in effort to link up with V Corps at Omaha Beach.
13 June	Counter-attack on Carentan by 17th SS-Panzergrenadier Division fails with heavy losses.
15 June	Failure of 90th Division leads to substitution of 9th Division and 82nd Airborne Division in westward attack.
16 June	Hitler meets Rommel and Rundstedt in France, insists on last-ditch defence of Cherbourg.
17 June	60th Infantry, 9th Division, reaches the sea at Barneville, cutting off Cotentin peninsula.
19 June	Final drive on Cherbourg begins as a three-division assault.
21 June	VII Corps reaches outer ring of defences of Fortress Cherbourg.
25 June	US infantry begin entering outskirts of Cherbourg.
26 June	Senior Wehrmacht commanders in Cherbourg forced to surrender.
28 June	Final outlying German positions in Cherbourg harbour surrender.
30 June	Last pocket on Cap de la Hague surrenders to 9th Division.
1 July	9th Division reports that all organized German resistance on Cotentin peninsula has ended.

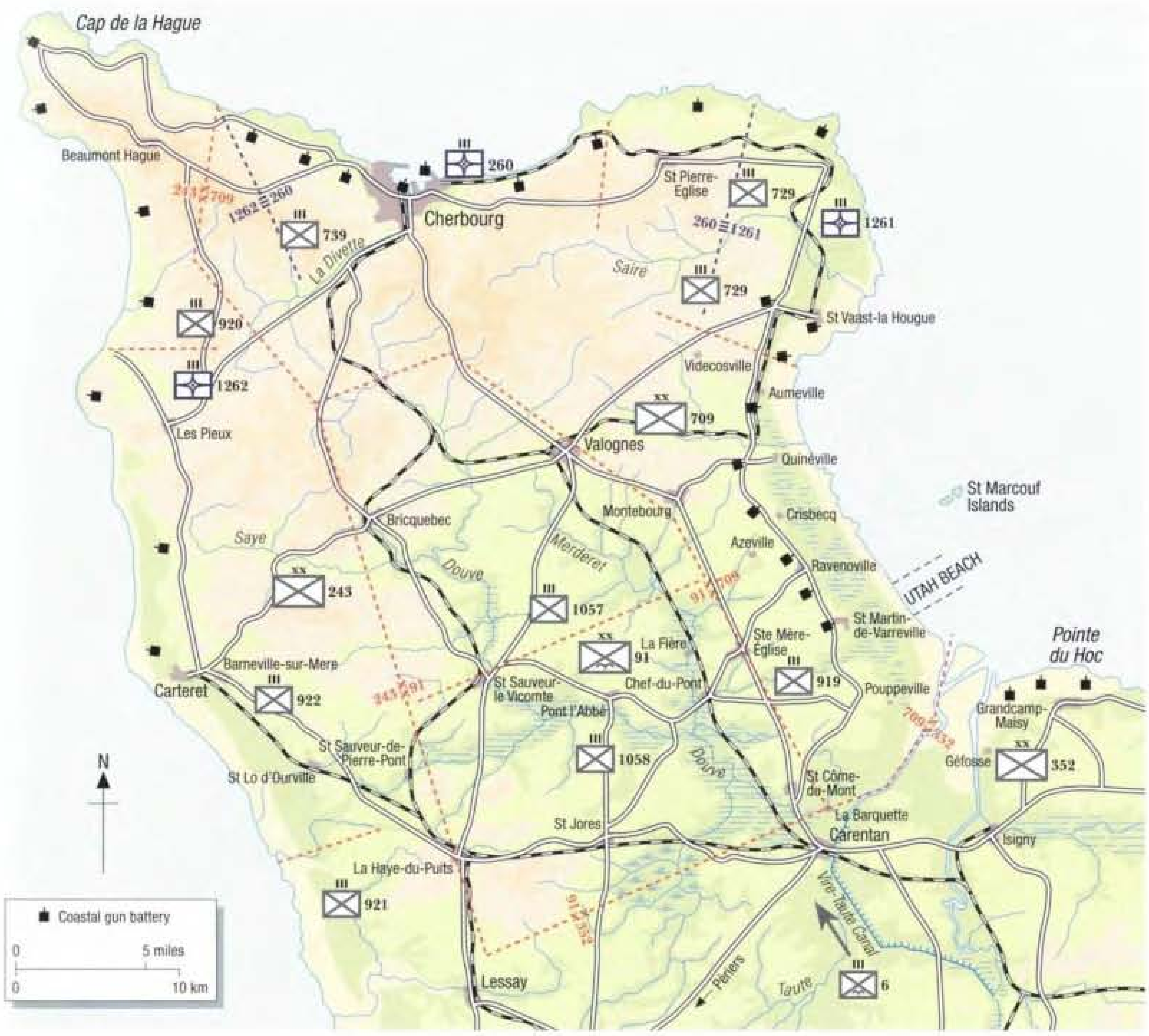
beach defences on other areas of the French coast such as Normandy and Brittany as an economy-of-force approach. These forces would prevent an uncontested Allied landing and would be reinforced in early 1944 as resources permitted.

Opposing armies

German forces

By the summer of 1944, the Wehrmacht had been bled white by three years of brutal conflict in Russia. The enormous personnel demands of the Eastern Front led to the cannibalization of units in France. Hitler 'wanted to be stronger than mere facts' and so the Wehrmacht order of battle became increasingly fanciful in the last year of the war, with impressive paper strength but increasingly emaciated forces.

In response to Rundstedt's strong criticism of the state of the forces in France in October 1943, Hitler issued Führer Directive 51 to reinvigorate the Wehrmacht in the west. Rundstedt's command increased from 46 to 58 divisions, partly from the transfer of burned-out divisions from the Eastern Front to France for rebuilding, and partly from newly formed divisions. The units on the Cotentin peninsula were second-rate formations. In 1942


Cap de la Hague
Beaumont Hague
243
709
1262
260
III
739
La Divette
Cherbourg
III
260
St Pierre-Eglise
III
729
260
1261
III
1261
Saire
III
729
St Vaast-la Hougue
III
920
III
1262
Les Pieux
Videcosville
Aumeville
XX
709
Valognes
Quinéville
St Marcouf Islands
Montebourg
Crisbecq
Bricquebec
Saye
Douve
Merderet
Azeville
Ravenoville
91
709
UTAH BEACH
XX
243
III
1057
St Martin-de-Varreville
Ste Mère-Église
La Fière
XX
91
Pointe du Hoc
III
919
Barneville-sur-Mere
Carteret
III
922
243
91
St Sauveur-le Vicomte
Pont l'Abbé
Chef-du-Pont
Pouppeville
709
352
Grandcamp-Maisy
N
St Sauveur-de-Pierre-Pont
III
1058
Douve
XX
352
Gefosse
St Lo d'Ourville
St Côme-du-Mont
La Barquette
St Jores
Carentan
Isigny
La Haye-du-Puits
III
921
91
352
Vire-Taute Canal
Coastal gun battery
0
5 miles
0
10 km
Lessay
Periers
Taute
III
6

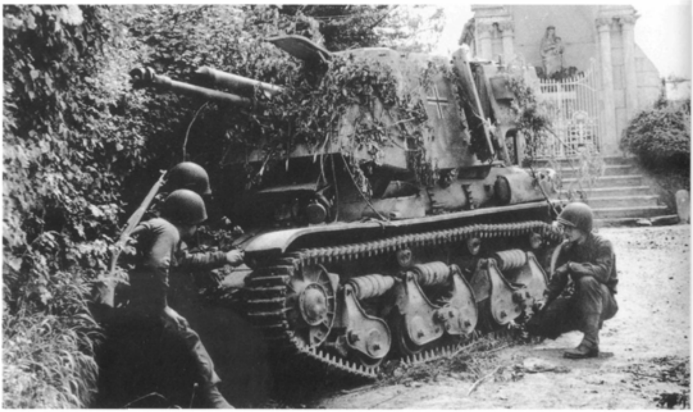
German defences on the Cotentin peninsula, 6 June 1944.

Rundstedt had initiated the formation of static divisions. These were under strength compared to normal infantry divisions, lacked the usual reconnaissance battalion, and had only three battalions of artillery. In addition, their personnel were mostly from older age groups. Through much of the autumn of 1943, the better troops were siphoned off to satisfy the insatiable requirements for more replacements on the Eastern Front. In their place came a steady stream of Ost battalions manned by 'volunteers' from among Red Army prisoners. Colonel von der Heydte of the 6th Fallschirmjäger Regiment recalled:

> The troops for a defence against an Allied landing were not comparable to those committed in Russia. Their morale was low; the majority of the enlisted men and noncommissioned officers lacked combat experience; and the officers were in the main those who, because of lack of qualification or on account of wounds or illness were no longer fit for service on the Eastern Front.

The weapons were 'from all over the world and seem to have been accumulated from all periods of the twentieth century'. For example, during the fighting along a 1.2 mile (2km) stretch of the Carentan front, von der Heydte's unit was equipped with four calibres of mortars from 78mm to 82mm, of German, French, Italian and Soviet design. General Marcks summed up his assessment during the Cherbourg manoeuvres in 1944: 'Emplacements without guns, ammunition depots without ammunition, minefields without mines, and a large number of men in uniform with hardly a soldier among them.'

The occupation divisions were bedevilled by the petty mindset of an army assigned to years of peaceful occupation duty. General Schlieben recalled:



German units in France exploited the large inventory of captured French armoured vehicles to flesh out their meagre armoured reserves. The small Renault R-35 infantry tank was fitted with a Czech 47mm anti-tank gun, resulting in a lightly armed and thinly armoured tank destroyer. On the Cotentin peninsula, these vehicles served with Panzer Abteilung 101, a training unit attached to the 709th Infantry Division.

> For someone who had served only in the east, the flood of orders, directives, and regulations which continually showered the troops was a novelty for me. This paper flood impressed me more than the tide along the Atlantic coast. Higher headquarters concerned themselves with trivial affairs of subordinate commanders. For example, it became a problem whether a machine-gun was to be placed 20 metres more to the right or the left ... A senior commander wanted to have an old ramshackle hut demolished to create a better field of fire so a written application had to be filed with the appropriate area HQ, accompanied by a sketch.

This practice began to change in February–March 1944 after Rommel's arrival. Rommel was insistent that beach defences be strengthened. There were not enough workers from the paramilitary Organization Todt to carry out this work, since they were involved in the construction of a series of massive concrete bases for the secret V-1 and V-2 missiles. Instead, the construction work was carried out by the infantry in these sectors, at the expense of their combat training.

The 709th Infantry Division defending Utah Beach provides a clear example of the problems. The division had been formed in May 1941 as an occupation division and in November 1942 it was converted into a static division. One of its battalions was sent to Russia in October 1943, and in June 1944 three of its 11 infantry battalions were manned by former Red Army prisoners-of-war. Two of these were attached Ost battalions formed from various Red Army prisoners while another was recruited from Georgian prisoners. The division was further weakened by the incorporation of a high percentage of troops recruited from Volkliste III, mostly Poles from border areas incorporated into Germany after 1939. The divisional commander later noted that their reliability in combat was doubtful, and he did not expect that the eastern battalions would 'fight hard in cases of emergency'. German troops in the division were over age with an average of 36 years. In spite of the mediocre quality of the troops, the division was relatively large for a static division with 12,320 men, and it had 11 infantry battalions instead of the nine found in the new pattern 1944 infantry divisions. Of these troops, 333 were Georgian volunteers and 1,784 were former Red Army POWs. The divisional artillery had three battalions, one with mixed French/Czech equipment, the second with French guns, and the third with Soviet guns. For anti-tank defence, it had 12 towed 75mm anti-tank guns and nine self-propelled 75mm tank destroyers. Tank support was provided by Panzer Abteilung 101, a training unit weakly equipped with ten Panzerjäger 35R, an improvised combination of Czech 47mm anti-tank guns on obsolete French Renault R-35 chassis. The division originally was spread along the entire Cotentin coastline, a distance of some 150 miles (240km). With the arrival of the 243rd Infantry Division in May, its frontage was reduced. It still stretched from Utah Beach all the way to the northern coast around Cherbourg, a distance of about 60 miles (100km). As a result, its defences were simply a thin crust along the shore with very little depth. Rommel hoped to compensate for the paucity of men with concrete defences, but the construction along the Cotentin coast received less priority than in other sectors.

The 243rd Infantry Division was formed in July 1943 as a static division and re-organized in January 1944. Two of its infantry battalions were converted from static units to bicycle infantry, though in the process, the division lost an infantry battalion. The division was originally in reserve, but in late May was shifted to defend the western coast, taking over from the over-extended 709th Infantry Division. On D-Day it included about 11,530 troops, somewhat under strength. Its artillery was mostly captured Soviet types, but it had a self-propelled tank destroyer battalion with 14 75mm Marder III and ten StuG III assault guns. The division was reinforced by Panzer Abteilung 206, equipped with a hodgepodge of old French tanks including 20 Hotchkiss H-39, 10 Somua S-35, two Renault R-35 and six Char B1 bis. This was deployed on the Cap de la Hague on the north-western tip of the Cotentin peninsula.

The 91st Luftlande Division was formed in January 1944 to take part in Operation *Tanne* (Pine Tree), an aborted airborne operation in Scandanavia planned for March 1944. When this mission fell through, the partially formed division was transferred to Normandy, arriving in May 1944 to reinforce the two static divisions. At the time of the invasion, it was under strength with only two infantry regiments and a single fusilier battalion, and numbered about 7,500 men. However, 6th Fallschirmjäger Regiment (FJR 6) from the 2nd Fallschirmjäger Division was attached to the division during the Normandy fighting. Colonel von der Heydte of FJR 6 considered that the combat efficiency of the division was poor, especially compared to his elite Luftwaffe troops. The division artillery was based around the 105mm Gebirgshaubitze 40 mountain gun, which did not share the same type of ammunition as the normal 105mm divisional gun. Once the division had expended its one basic load of ammunition, its guns were useless. During the course of the fighting, its artillery regiment was re-armed with a mixture of captured artillery types including Czech and Soviet types. Panzer Abteilung 100, headquartered at Château de Francquetot, provided armoured support. It had a motley collection of captured French tanks including 17 Renault R-35, 8 Hotchkiss H-39, one Somua S-35, one Char B1 bis and one PzKpfw III.

There were a number of smaller formations in the area as well. Sturmabteilung AOK 7 was an assault infantry battalion attached to the Seventh Army headquarters. On D-Day, it was redeployed from Cherbourg to the 701st Infantry Division during its actions near the Vire River.

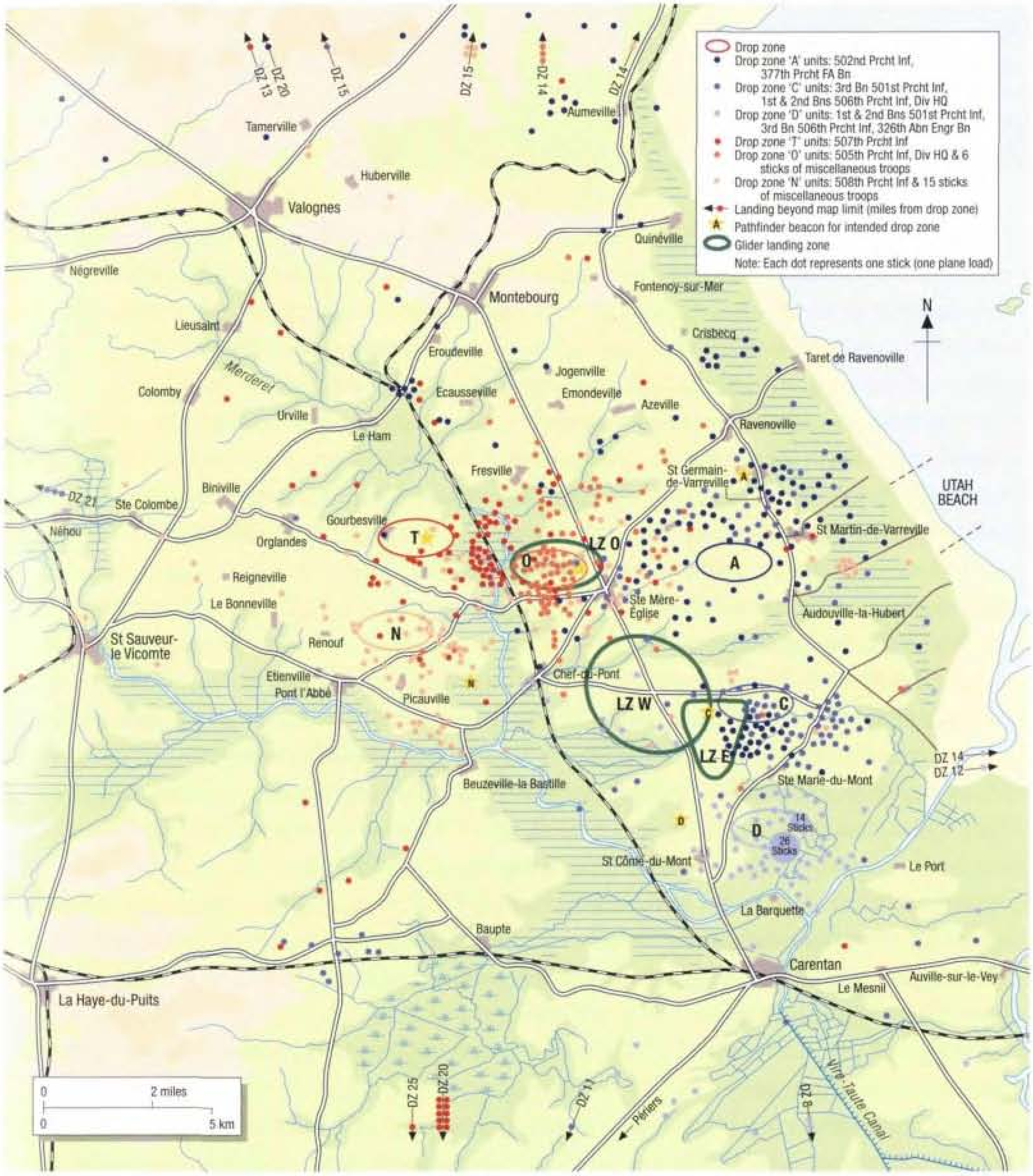
Even if the German units on the Cotentin peninsula were not the best in the Wehrmacht, they were still a credible fighting force. Training and tactics were based on hard-won battle experience, and there were Eastern Front veterans in many of the divisions. During the fighting, General Barton visited one of his battalions that had been stalled by the German defences and assured the officers that the German troops facing them were second-rate. A young lieutenant replied, 'General, I think you'd better put the Germans on the distribution list. They don't seem to realize that!'

Besides the infantry formations, there were a significant number of coastal gun batteries located around the Cotentin peninsula. The army controlled two coastal artillery regiments (Heeres-Küsten-Artillerie-Abteilung), HKAA 1262 on the west coast of the peninsula and HKAA 1261 on the east coast. Some of these took part in the later land actions, most notably the Azeville and Crisbecq battery of HKAA 1261 near St Marcouf. The navy's MAA 260 (Marine-Artillerie-Abteilung) was responsible for the seven naval batteries located mainly in the area around Cherbourg, while MAA 608 protected the port of Granville on the western side of the peninsula.

US forces

The US units taking part in the initial landings contained the two best light infantry divisions in the army, the 82nd and 101st Airborne Divisions. The 82nd Airborne Division had already seen combat in Sicily and Italy, though in June 1944, more than half of its paratroopers were replacements. Normandy was the first combat jump for the 101st Airborne Division, but like the 82nd, it was formed on the basis of volunteer troops and had exceptionally thorough training. In addition, its officer ranks were stiffened by transferring veterans from the 82nd Airborne Division. Both were elite units in the true sense of the word.

The 4th Infantry Division had been reactivated in 1940 and at first was equipped as a motorized infantry division. This concept was eventually dropped, and the division reverted back to a conventional organization in August 1943 prior to being sent to England. While Bradley had insisted on using at least one experienced division in the assault at neighbouring Omaha Beach, Utah Beach was viewed as a less demanding mission. Nevertheless, it required the use of a well-trained and ably led division, and the 4th Division was chosen. The assault would be conducted by Combat Team 8 (CT8) with the division's 8th Infantry Regiment forming its core.


Drop zone
Drop zone 'A' units: 502nd Prcht Inf, 377th Prcht FA Bn
Drop zone 'C' units: 3rd Bn 501st Prcht Inf, 1st & 2nd Bns 506th Prcht Inf, Div HQ
Drop zone 'D' units: 1st & 2nd Bns 501st Prcht Inf, 3rd Bn 506th Prcht Inf, 326th Abn Engr Bn
Drop zone 'T' units: 507th Prcht Inf
Drop zone 'O' units: 505th Prcht Inf, Div HQ & 6 sticks of miscellaneous troops
Drop zone 'N' units: 508th Prcht Inf & 15 sticks of miscellaneous troops
Landing beyond map limit (miles from drop zone)
Pathfinder beacon for intended drop zone
Glider landing zone
Note: Each dot represents one stick (one plane load)
N
DZ 13
DZ 20
DZ 15
DZ 15
DZ 14
DZ 14
Tamerville
Huberville
Aumeville
Valognes
Quinéville
Négreville
Montebourg
Fontenoy-sur-Mer
Lieusaint
Crisbecq
Taret de Ravenoville
Eroudeville
Merderet
Jogenville
Colomby
Ecausseville
Emondeville
Azeville
Urville
Le Ham
Ravenoville
Fresville
St Germain-de-Varreville
UTAH BEACH
DZ 21
Ste Colombe
Biniville
Néhou
Gourbesville
Orglandes
T
O
LZ O
A
St Martin-de-Varreville
Reigneville
Le Bonneville
Ste Mère-Église
Audouville-la-Hubert
St Sauveur-le Vicomte
Renouf
N
Etienville
Pont l'Abbé
Chef-du-Pont
Picauville
LZ W
C
LZ E
DZ 14
DZ 12
Beuzeville-la Bastille
Ste Marie-du-Mont
D
14 Sticks
26 Sticks
St Côme-du-Mont
Le Port
La Barquette
Baupte
Carentan
Le Mesnil
Auville-sur-le-Vey
La Haye-du-Puits
0
2 miles
0
5 km
DZ 25
DZ 20
DZ 11
Périers
DZ 8
Vire-Taute Canal

US airborne landings, 6 June 1944.

Paratroopers – probably from the 82nd Airborne – sit on canvas benches along the fuselage of a C-47 during the trip to Normandy with a captain closest to the camera. (Military History Institute)

Armoured support for CT8 came from the 70th Tank Battalion, the most experienced separate tank battalion in the US Army, which had previously seen combat as a light tank battalion in North Africa and Sicily. For D-Day, two of its companies were equipped with M4A1 Duplex Drive (DD) amphibious tanks. These tanks were modified by the addition of a folding canvas skirt to provide buoyancy, and a pair of propellers for propulsion in the water. In order to deal with beach obstacles, especially the seawall, there were plans to equip the third medium tank company with 7.2in demolition rockets in a T40 launcher over the turret. The first four rocket launchers were delivered in May and tested against simulated beach obstructions. The rockets were not particularly effective, but the tank crews showed that two or three high explosive rounds from the tank's 75mm gun were adequate to breach seawalls. As a result, Company C was landed without the rocket launchers. The battalion's light tank company was landed later on D-Day and assigned to support the 82nd Airborne Division.

In the build-up immediately after D-Day, three more infantry divisions were gradually injected into the Cotentin fighting. The 90th Division was based around National Guard units raised in the Texas–Oklahoma area, hence its nickname 'Tough Ombres'. It developed a bad reputation in Normandy due to poor leadership, which in turn led to poor training. It went through a series of leadership changes and by the fall, the problems had been largely corrected. It fought with distinction with Patton's Third Army in Lorraine in September 1944. In contrast, the 9th Division was widely regarded as one of the army's best infantry divisions, with previous combat experience in North Africa and Sicily. It would play a critical role in the capture of Cherbourg. The 79th Division was activated in 1942 and shipped to Britain in April 1944. It was a fairly typical US infantry division with good training and leadership.

One of the most significant Allied advantages was the availability of continual air support. At this stage of the war, cooperation between ground and air units was still in a formative stage, and did not come to fruition until late July during Operation *Cobra*. Nevertheless, continual air operations over the Cotentin peninsula by roving fighter-bombers made any concentrated daytime movement by German units impossible. Some measure of airpower's impact can be surmised from the significant percentage of senior German commanders killed by air attack while trying to move between their units.

Opposing plans

US plans

The original Operation *Overlord* plans did not envision any Allied landings to the west of the Vire River at the base of the Cotentin peninsula. In January 1944 when General Montgomery was first briefed, he insisted that the frontage of the assault be widened. Montgomery was not entirely convinced of the viability of the artificial harbours and wanted a landing west of the Vire to facilitate an early capture of Cherbourg. The preliminary Operation *Neptune* plan of 1 February 1944 and the First US Army (FUSA) plan of 25 February expanded the US beachheads to two, one in the Grandcamps sectors (Omaha), and one further east near Les Dunes de Varreville (Utah).

Although many beaches on the eastern Cotentin coast were suitable for landing, the areas behind the beach were a problem since many had been flooded by the Germans. Access between the beach and inland areas was over a small number of narrow causeways that could be defended easily by small German detachments. The second problem was the terrain of the peninsula itself. The Douve River runs through the centre of the peninsula, and the low-lying areas of the peninsula were naturally marshy. The Germans exploited this to reduce the number of possible airborne landings by using locks to flood many lowland fields. The planners wanted a beach with at least four causeways to permit the transit of a single division off the beach on D-Day, compared to two on neighbouring Omaha Beach. The coast immediately west of Omaha Beach was the obvious solution.

To make certain that the causeways remained open, an airborne division would be landed behind the beach before H-Hour on D-Day. Many planners were reluctant to place too much faith in paratroop operations, especially in light of the fiasco on Sicily in 1943. On that occasion the aircraft transporting the 82nd Airborne Division were brought under fire by the naval forces, and the paratroopers subsequently landed in widely scattered and ineffective groups. However, Eisenhower believed that the Sicily operation had merely shown that the airborne force had to land in a more concentrated fashion, and he agreed with General Ridgway to expand the existing US airborne divisions. The initial plan in February envisioned using the 101st Airborne Division immediately behind Utah Beach to secure the causeways. Bradley's FUSA planners wanted the 82nd Airborne dropped further west to permit a rapid cutoff of the Cotentin peninsula, preventing the Germans from reinforcing Cherbourg.

These plans were viewed as extremely risky but Eisenhower decided that they were essential to the operation and that the risks would have to be accepted. The plans continued to evolve well into May, only days before D-Day. Allied intelligence learned of the move of the German 91st Luftlande Division into the central Cotentin peninsula in mid-May. This made the planned landing of the 82nd Airborne Division around

James Flanagan of C/502nd Parachute Infantry Regiment displays a German flag captured during the fighting on D-Day. This scene was photographed at 'Stopka strongpoint', the Marmion farm south of Ravenoville where 'Mad Major' John Stopka was trying to gather troops from the 502nd and 506th Parachute Infantry Regiments who had landed nearby.

St Sauveur-le-Vicomte too risky. Instead, its drop zone was shifted to the Merderet River area, and the 101st Airborne drop zone was shifted slightly south so that both divisions would control an easily defensible area between the beaches and the Douve and Merderet rivers.

German plans

German defensive plans were in a state of flux due to serious disagreements between Rundstedt and Rommel over the deployment and control of the Panzer reserve. To some extent this debate was irrelevant to the Cotentin peninsula, since no senior German commander was particularly concerned that this area would be the focus of an Allied invasion. Until May 1944, the defence of the entire 155 miles (250km) of coastline on the Cotentin peninsula was the responsibility of a single second-rate division. The western coast was lightly guarded since the navy had argued that the heavy seas off the west coast as well as the heavily defended Channel Islands made amphibious landings unlikely. In mid-May, the navy staff had a change of heart, and began to suggest that the Allies might land on both the east and west coasts, with simultaneous attacks on either side of Cherbourg. Shortly afterwards, Rommel visited the area, and later had a conference with Dollman and Marcks about the state of defences in this sector. Von Schlieben argued that the port facilities in Cherbourg should be sabotaged immediately to make the port an unattractive target, and to permit units to withdraw to the base of the Cotentin peninsula rather than becoming trapped. The navy would not even consider such a plan and the proposal was ignored. Instead, the defence of the Cotentin peninsula was substantially increased. The 243rd Infantry Division was shifted from its location further south in reserve, and placed along the west coast. The partially formed 91st Luftlande Division was placed at the base of the peninsula to back up the two static divisions.

Defence of the Cotentin coast did not have as high a priority as other sectors further east, which were judged to be more likely objectives for an Allied amphibious assault. The forces along the coast were spread very thin, locally concentrated in strongpoints 'like a string of pearls'. Defences were not particularly heavy along Utah Beach, since it was presumed that such a beach would be an unattractive objective given the tidal marshes behind it. Two battalions of Grenadier Regiment 919 (GR 919) held a total of 25 strongpoints from Le Grand Vey in the south to the Aumeville beach in the north, a distance of about 15 miles (25km). The strongpoints were categorized into two types: *Wiederstandnest* (WN = reinforced position) and *Stutzpunkt* (StP = support position). These strongpoints typically consisted of a platoon of 40 troops with several small bunkers, a few machine-gun pits or concrete-reinforced 'Tobruks' and a few anti-tank guns or obsolete field guns. To make up for the shortage of troops, the formations along the coast had more firepower than a normal infantry unit, even though the weapons were a motley selection of obsolete or captured types.

The strongpoint that figured most directly in the subsequent fighting was WN5. It was manned by a platoon from 3/GR 919 and was commanded by Leutnant Arthur Jahnke, a young veteran of the Eastern Front and holder of the Knight's Cross. It included a 50mm anti-tank gun in a Bauform 667 casemate, two 50mm anti-tank guns in open concrete pits, one French 47mm anti-tank gun in a concrete pit, a Bauform 67 with a French tank turret and 37mm gun, four mortar and machine-gun Tobruks and a half-dozen other bunkers and shelters. One of the platoon's more exotic weapons was a group of Goliath remote control demolition vehicles, a type of wire-guided tracked vehicle designed to be used like a land torpedo to attack high-value targets such as tanks and landing craft. These were deployed from small caves facing the beach. A second strongpoint, WN4, was located immediately to the west of WN5, covering the main access causeway off the beach.

The regimental commander, Oberstleutnant Gunther Keil, did not agree with Rommel's tactic of placing all of his troops in the forward bunkers. Instead, he placed a minimal number of troops on the coast, and the rest of each platoon as an 'alert unit' (*Alarmeinheiten*) in the buildings behind the beach. Artillery in this sector included a battery from Sturmabteilung AOK 7 west of Foucarville, and a battery of multiple rocket launchers from I/Nebelwerfer Regiment 100 south of Brucheville. There were also three batteries from an army coastal artillery regiment (HKAA 1261) in this sector: the 1/HKAA 1261 in St Martin-de-Varreville with four ex-Soviet 122mm guns, the 2/HKAA 1261 in Azeville with four French Schneider 105mm guns, and the 3/HKAA 1261 in Crisbecq with three massive 210mm Skoda guns.

Unlike neighbouring Omaha Beach, the Utah Beach sector was relatively flat, not affording the excellent fields of fire to be found further east on the coast. The beach obstacles in front of WN5 were far less extensive than those at neighbouring Omaha Beach, and the obstacles largely petered out in the area in front of Grande Dune where the landings actually occurred. Although GR 919 had attempted to reinforce these defences, the tidal conditions simply washed many of the obstacles ashore. The main reserve in this sector was the Georgian Battalion 795 Ost, which was located further west near Criqueville, and GR 1058 from the 91st Luftlande Division located in the central peninsula in the landing zone of the 82nd Airborne Division.

The Kriegsmarine lacked sufficient forces to seriously entertain the idea of repelling the Allied invasion at sea. Marinegruppe West, under Vizeadmiral Theodor Krancke, was divided into sectors with Konteradmiral Rieve's Channel Coast responsible for the

Normandy coast through to the Dutch border. The port nearest to Utah Beach was Cherbourg, which contained two torpedo flotillas, totalling 16 S-boats. Krancke had attempted to inhibit the invasion activities by a programme of minelaying off the Normandy coast to coincide with Rommel's fortification efforts. Unbeknownst to him, the Allies were aware of the location of nearly all of these minefields due to the breaking of the 'Enigma' codes. In addition, 'Enigma' allowed the Royal Navy to vigorously disrupt minelaying in the weeks before D-Day. Attempts to mine the Seine bay on 24 May were met by a force of British torpedo boats and Coastal Command aircraft that put an end to any further attempts. The lack of bombproof U-boat shelters along the Channel inhibited Krancke from deploying submarines in the invasion area.

The Luftwaffe played virtually no role in the fighting in the Cotentin sector during June. Allied air superiority was so great, and the Luftwaffe so weak that there was little hope for conducting Luftwaffe operations so far west from the air bases near Paris.

On 4 June 1944, Major Lettau, the chief Luftwaffe meteorologist in Paris, released a forecast indicating that the Allies were unlikely to launch an invasion over the next fortnight due to rough seas and gale-force winds that were unlikely to weaken until mid-June. This forecast convinced OB West that it would be an appropriate opportunity to conduct a major command wargame in Rennes to study possible counterstrokes against Allied airborne attacks in Normandy. As a result, about half the divisional commanders and a quarter of the regimental commanders were on their way to a wargame in Rennes. Indeed, the weather forecast was so bad that many units were using the opportunity to give their men rest from the strenuous construction programme along the coast. Rommel used the spell of bad weather to visit Germany, hoping to convince the Führer to release more Panzers to his control for a forward defence of the coast.

D-Day

The first troops to land in France in preparation for Operation *Neptune* were OSS (Office of Strategic Service) teams, usually consisting of two US soldiers trained in the operation of signal devices, teamed with three British commandos for site security. A half-dozen of these teams were flown into France around 01.30hrs on 3 June to mark airborne drop zones for later pathfinder teams who would bring in more extensive marking equipment.

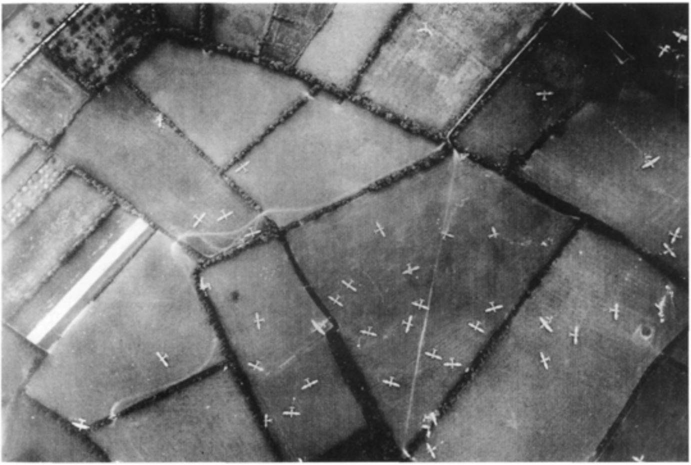
The troops of the two airborne divisions began final preparations for the Normandy airdrops on 5 June at 15 separate airfields in southern England. The air delivery of the two divisions was assigned to the IX Troop Carrier command. Mission *Albany*, the delivery of the 101st Airborne Division, was assigned to the 50th Troop Carrier Wing and Mission *Boston*, the delivery of the 82nd Airborne Division, was assigned to the 52nd Wing. The initial wave used 821 troop-laden C-47 and C-54 transports. Each aircraft carried a 'stick' of paratroopers, usually 18–20 per aircraft in most aircraft, but nine to ten in parachute artillery units due to the amount of other equipment carried.

To conduct a nighttime drop, the transport pilots were dependent on visual and radar signals to locate the drop zone. Pathfinders were parachuted into the drop zones ahead of the main wave to set up both types of signals – a set of seven colour-coded Aldis lamps in the shape of a 'T' and an AN/PPN-1 Eureka radar beacon. The Eureka set was a useful aid for the approach to the drop zone, but became less effective about two miles out, requiring the use of the Aldis signal lamps for the final approach. Nineteen aircraft carrying the pathfinders departed before midnight and they began landing in France around 00.15hrs on 6 June 1944. The following waves of C-47 transports were fitted with a 'Rebecca' system to pick up the signal emitted from the Eureka ground beacon, and some were also fitted with 'Gee' navigation aids.

On approaching the drop zones, the pathfinder aircraft encountered an unexpected bank of cloud that created navigational problems. In the 101st Airborne sector, only the teams allotted to Drop Zone C parachuted close to the target. Likewise in the 82nd Airborne Division sector, only one batch of pathfinders was accurately dropped into Drop Zone O. In the case of the other four drop zones, the pathfinders were dropped so far away from their target that they did not have enough time after their landing to reach their designated drop-zone. As a result, some of the pathfinder teams set up their landing beacons in areas away from the planned drop zones, while other teams were able to set up only the Eureka beacons since the presence of German troops nearby made it impossible to set up the Aldis lamps.

The main wave of C-47 transports began taking off from England around midnight. The two skytrains coalesced over the English Channel, and then followed a route around the Cotentin peninsula, passing between the Channel Islands, and entering enemy airspace

The extreme congestion in the glider landing zones is made very evident in this overhead view of some of the gliders east of Les Forges.



over the west Cotentin coast, heading north-eastward toward the drop zone, and exiting over Utah Beach. In parallel, a force of RAF Stirling bombers flew a diversionary mission, dropping chaff to simulate an airborne formation and dropping dummy paratroopers and noisemakers into areas away from the actual drop zones. The weather conditions were a full moon and clearing skies. The flight proved uneventful until the coast, and the aircraft flew in tight formation in a 'V-of-Vs'. On reaching the coast, the problems began. The aircraft encountered the same dense cloud that had frustrated the pathfinders. The pathfinder transports had not radioed back a warning about this due to radio silence. The clouds created immediate dangers due to the proximity of the aircraft in formation, and C-47s began to frantically manoeuvre to avoid mid-air collisions. Some pilots climbed to 2,000ft (610m) to avoid the clouds, others descended below the cloud bank to 500ft (152m), while some remained at the prescribed altitude of 700ft (213m). This cloud bank completely disrupted the formation and ended any hopes for a concentrated paratroop drop.

Anti-aircraft fire began during the final approach into the drop zones near the coast. Although they had been instructed to maintain a steady course, some pilots began jinking their aircraft to avoid steady streams of 20mm cannon fire. It was an inauspicious start for an inherently risky mission.

D-DAY AIRLIFT OPERATIONS, IX TROOP CARRIER COMMAND

Mission	*Albany*	*Boston*	Total
Aircraft sorties	433	378	811
Aborted sorties	2	1	3
Aircraft lost or missing	13	8	21
Aircraft damaged	81	115	196
Aircrew killed or missing	48	17	65
Aircrew wounded	4	11	15
Troops carried	6,928	6,420	13,348
Troops dropped	6,750	6,350	13,100
Howitzers carried	12	2	14
Cargo carried (tons)	211	178	389

Albany mission

The 101st Airborne Division was the first to land around 01.30hrs on 6 June 1944. Its primary objective was to seize control of the area behind Utah Beach between St Martin-de-Varreville and Pouppeville to facilitate the exit of the 4th Infantry Division from the beach later that morning. Its secondary mission was to protect the southern flank of VII Corps by destroying two bridges on the Carentan highway and a railroad bridge west of it, gaining control of La Barquette locks, and establishing a bridgehead over the Douve River north-east of Carentan.

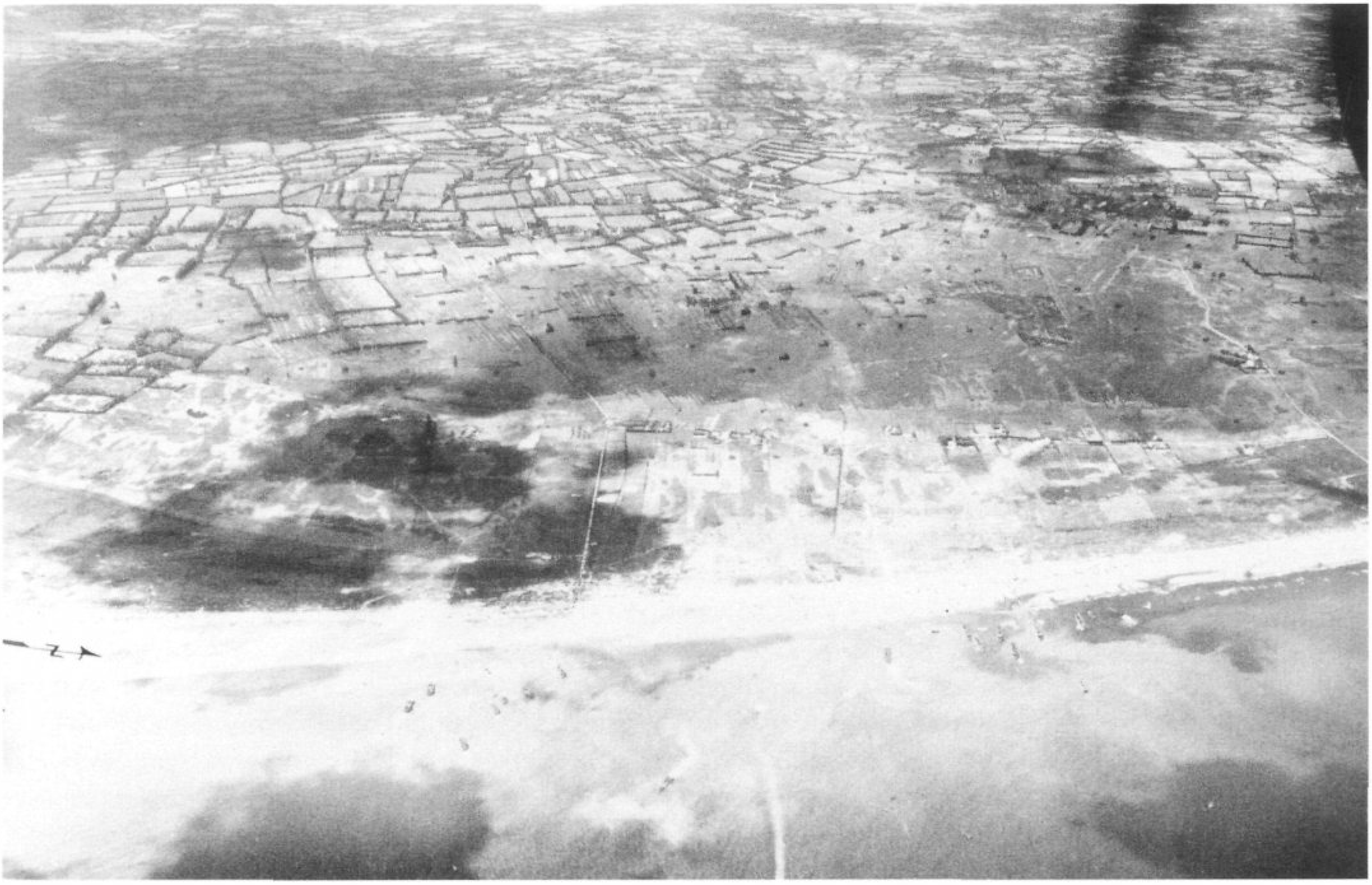
The 502nd Parachute Infantry Regiment (PIR) and 506th PIR (less one battalion) were assigned to the primary objective. The first wave of the 502nd PIR consisted of the 2/502nd PIR and HQ/502nd PIR. The transport aircraft carrying these units were scattered by cloud cover and flak, landing far from Drop Zone A. Most of the 2/502nd PIR was dropped compactly but inaccurately on the far edge of Drop Zone C, three miles south of intended Drop Zone A. The battalion landed in an area divided up by a maze of dense hedgerows, the

Normandy bocage, and had a great deal of difficulty assembling and orienting themselves. These units spent most of D-Day regrouping and took no part in the initial fighting.

The 3/502nd PIR landed in very scattered fashion to the east of Ste Mère-Église. The battalion commander, Lieutenant Colonel Robert Cole, gathered about 75 men and began moving on the coastal battery at St Martin-de-Varreville. They found that the guns had been removed and the position deserted due to pre-invasion bombardment, so they moved on to their next objective, the western side of Audouville-la-Hubert causeway (Exit 3), arriving there around 07.30hrs. German troops of the I/GR 919 abandoning strongpoint WN8 began retreating across this causeway around 09.30hrs and were ambushed by the concealed paratroopers, losing 50–75 men. This battalion also attempted to clear Exit 4, and while they found it undefended, the location of the nearby German batteries made this causeway unusable for exiting the beach. Contact was made with the 4th Infantry Division around 13.00hrs, and the battalion spent the rest of the day collecting their scattered and missing men.

Lieutenant Colonel Patrick Cassidy's 1/502nd PIR landed near St Germain-de-Varreville, with 20 of the 36 aircraft within a mile of the beacon. One group led by Cassidy moved toward the stone buildings near Mésières, the garrison for the German coastal battery at St Martin-de-Varreville. Cassidy's group occupied the crossroads outside Mésières and determined that the two northern exits assigned to his battalion were clear. On meeting another group of about 45 men from his unit, Cassidy ordered them north to create a

An aerial view of Utah Beach taken on D-Day. The area behind the beach was flooded, and beyond that, the bocage typical of Normandy can be seen.



defensive perimeter near Foucarville. He kept about a company of troops near the crossroads to prevent any intervention against the beach from the west, and sent a squad to the eastern side of Mésières to clean out any German troops. A team led by Staff Sergeant Harrison Summers killed or captured about 150 German troops in a series of one-sided encounters. As this action was winding down, the regimental commander, Lieutenant Colonel John Michaels, arrived with 200 men. This freed up the remainder of Cassidy's men at the crossroads, who then followed the other paratroopers to the Foucarville area. Cassidy's force advanced to the west, since a secondary mission of his unit was to link up with the 82nd Airborne Division that was scheduled to land near Ste Mère-Église. In doing so, a company became engaged in a series of encounters with German infantry around the village of Fournel that lasted through much of D-Day. The 1/502nd PIR held the northern perimeter throughout D-Day without serious challenge from the Germans except at Fournel.

Of all the units in this sector, the 377th Parachute Field Artillery, with 12 75mm pack howitzers, was the most badly dispersed with some even landing near the marshes around St Marcouf, and others far north around Valognes. This meant there was no artillery fire support in this sector except for a single howitzer.

The southern sector was the responsibility of the two battalions of the 506th PIR, landing in Drop Zone C. The cloudbank disrupted the C-47s, and some aircraft passed over a concentration of German flak near Etienville; six aircraft were shot down and 30 damaged. In spite of the fire, some drops were concentrated, with one serial of 14 aircraft dropping almost on top of Drop Zone C and another serial of 13 bunching their sticks a mile and a half east and south-east of the drop zone. But the other serials were much further from their intended targets due to confusion over the beacons. About 140 men of the HQ and 1/506th PIR assembled in the regimental area in the first hours of the landing, including the regimental commander, Colonel Sink.

The 2/506th PIR landed north of the drop zone in the same area as the 501st PIR, but Lieutenant Colonel Robert Strayer managed to collect about 200 men by 03.30hrs. Strayer's group began moving south to seize the areas behind the Houdienville (Exit 2) and Pouppeville (Exit 1) causeways. Sink had no idea where Strayer's men had landed, and so instructed the assembled paratroopers of Lieutenant Colonel William Turner's 1/506th PIR to take control of the Pouppeville (Exit 1) causeway. Strayer's men were delayed by persistent German small-arms fire and did not arrive at the Houdienville (Exit 2) causeway until early afternoon, by which time the access road had already been overrun by troops from the 4th Infantry Division moving inland. Turner's column also had tough going and it took several hours to reach the Poupeville (Exit 1) causeway.

Next to land were the 3/501st PIR and the divisional HQ, which was to control the planned glider-landing area near Hiesville. The 3/501st PIR lost three aircraft to flak on the approach. A force of about 300 paratroopers from the HQ and Lieutenant Colonel Julian Ewell's 3/501st PIR congregated near Hiesville. General Taylor, not knowing what was happening with Strayer's and Turner's two columns, decided to ensure that the southernmost Poupeville causeway was under US control, and so despatched Colonel Ewell with 40 of his men around 06.00hrs. This was the first of the three paratrooper columns to actually reach the causeway around 08.00. The 2/GR 919 manned the WN6 strongpoint covering the western end of the causeway and WN2a on the beach itself. The defences were poorly organized, but it took nearly four hours for the outnumbered paratroopers to

The paratroop and glider landings on D-Day were followed by a number of additional resupply missions, including Freeport *to the 82nd and* Memphis *to the 101st Airborne on D+1. This photo shows some of the drops near LZ W where the glider landings had previously occurred on D-Day. (Military History Institute)*

overcome the German defenders in house-to-house fighting. The Germans surrendered around noon after suffering 25 casualties; 38 surrendered and the remainder who tried to escape across the causeway toward strongpoint WN2a on the beach were captured by advancing infantry of the 4th Division. About half of Ewell's men were casualties, but they made contact with the 2/8th Infantry at Exit 1.

Fighting flared up near the divisional CP in Drop Zone C due to the presence nearby of troops from 191st Artillery Regiment centred around Ste Marie-du-Mont. The paratroopers gradually eliminated the batteries, and the town was finally cleared of German troops by mid-afternoon when they were reinforced by GIs from the 8th Infantry advancing from the beaches.

The final groups to land were the 1/501st PIR, elements of the 2/501st PIR and the 3/506th PIR as well as engineer and medical personnel. These forces were earmarked for Drop Zone D, the southernmost of the drop zones. The approach to the drop zone was hot, with a considerable amount of light flak, searchlights and magnesium flares. Six C-47s were shot down and 26 damaged. These drops were among the most successful in putting the paratroopers near their intended objective, but this was not entirely fortuitous, as the Germans had assumed that this area could be used for airborne landings. As this was the last of the divisional landings, the German troops in the sector were alerted and had troops near the landing zone. The 1/501st PIR commander was killed and his executive officer captured. The regimental commander, Colonel Johnson, landed near the centre of the zone and was able to rally about 150 paratroopers. He immediately set off for the primary objective, La Barquette locks controlling the flooding of the areas along the Douve River. The force brushed aside the German sentries and occupied the locks, but was soon under fire from German artillery. With the situation at the locks in hand, around 09.00hrs Johnson and about 50 paratroopers returned to the landing zone to seek reinforcements. About half of 2/501st PIR was engaged in a sharp fire-fight around the village of Les Droueries, and had been unable to disengage and move south to the objective. Instead of encountering the single platoon expected in this sector, they were confronted by an entire battalion, III/GR 1058. They spent most of the day fighting around the town of St Côme-du-Mont. Johnson was able to collect a few additional paratroopers and set off to seize or destroy the bridges over the Douve River below its junction with the Merderet River.

The third unit landing in Drop Zone D, the 3/506th PIR, had the roughest time. German troops were waiting in the landing area and had soaked a wooden building with fuel. They set the building on fire, illuminating the descending paratroopers. The battalion commander and his executive officer were among those killed in the first moments. Captain Charles Shettle, the battalion S-3, landed away from the main drop zone and set off to the Le Port bridge with about 15 men. This small group gradually increased in size as it attracted scattered paratroops, and emplaced itself at two of the bridges by 04.30hrs. They were forced back by German counter-attacks around 06.30hrs as they were nearly out of ammunition. However, they took up positions near the bridges, and were able to keep the Germans at bay. Ironically, the next day Shettle was able to call in a P-47 strike in hopes of attacking the German positions, but due to confusion, the P-47s skip bombed the bridges instead.

Boston mission

The 82nd Airborne Division revised its plans on 28 May due to the discovery that the 91st Luftlande Division had moved into its planned landing area. The 82nd Airborne's new assignment was to land two regiments on the western side of the Merderet River, and one regiment on the eastern side around Ste Mère-Église to secure the bridges over the Merderet. The landings of the 82nd Airborne were even more badly scattered than those of the 101st Airborne and as a result, only one of its regiments was able to carry out its assignment on D-Day. The 82nd Airborne began landing about an hour after the 101st Airborne, around 02.30hrs.

The 505th PIR was assigned to land on Drop Zone O to the north-west of Ste Mère-Église. Unlike many other transport serials, those flying to Drop Zone O spotted the cloudbank early and managed to fly over it in coordinated fashion. The only cloud problems were over the drop zone itself, forcing some C-47 pilots to initiate the drop higher than usual at 1,000 feet. The pathfinders had done such a thorough job marking it that many aircraft circled back over the area to drop the paratroopers more accurately. This was the most precise series of jumps of any that night. Lieutenant Colonel Edward Krause's 3/505th PIR was assigned to take the town of Ste Mère-Église and managed to assemble about 180 paratroopers. The town had been garrisoned by the supply element of the divisional anti-aircraft unit Flak Regiment Hermann, but most of the 200 men of the unit left the town before the arrival of the paratroopers. Krause ordered his men into the town with explicit instructions to limit their actions to knives, bayonets and grenades to make it easier to distinguish German defenders. Krause's group quickly seized the town, killing about ten German troops and capturing 30 others.

Lieutenant Colonel Benjamin Vandervoort's 2/505th PIR collected about half its troops and set out to establish a defence line north of the drop zone as planned. However, at 09.30hrs, the German GR 1058 staged a counter-attack against Ste Mère-Église from the south. The regimental commander, Colonel William Ekman, ordered Vandervoort to return back southward to assist in the defence. Before doing so, he broke off a platoon to remain at Neuville and carry out the battalion's original mission. It proved to be a crucial decision. Shortly after establishing a defensive perimeter north of the town, Lieutenant Turner

Turnbull's platoon was hit by a German infantry company but managed to hold its position during an eight-hour struggle. Only 16 of the 44 paratroopers in Turnbull's platoon survived the fighting, but the platoon's defence shielded the battalion while it faced an even greater threat to the south.

The 2/505th PIR arrived in Ste Mère-Église around 10.00hrs and took over part of the perimeter defence. The first German attack consisted of two companies from the Georgian Battalion 795 and troops of the 91st Luftlande Division with a few of the division's StuG IIIs. It was repulsed by the 3/505th PIR. Colonel Krause ordered a counter-attack and about 80 men from Company I advanced southward along the road, hitting one of the retreating German convoys with a grenade attack. This was the one and only German attack of the day against the town.

The 1/505th PIR landed with the headquarters including General Ridgway. Around 04.00hrs, Company A under Lieutenant John Wisner set off for the La Fière bridge with about 155 paratroopers. This group increased in size as it approached the bridge, picking up stragglers from the 507th and 508th PIR. The advance on the bridge was slowed by frequent encounters with German troops. An initial attempt to rush the bridge failed due to entrenched German machine-gun teams, the first of several attempts that day in a confusing series of engagements.

The two other regiments of the 82nd Airborne Division landing in Drop Zones T and N on the west side of the Merderet River were hopelessly scattered. Pathfinders had been unable to mark the drop zones, in some cases due to the proximity of German troops. The transport aircraft were disrupted by the coastal cloudbank, and after arriving over the drop area, the pilots had searched in vain for the signals, or in some cases homed in on the wrong beacon. Much of the 507th PIR was dropped into the marshes east of Drop Zone T while the 508th was dropped south of Drop Zone N. These swamps were deep and many of the heavily laden paratroopers drowned before they could free themselves of their equipment. In addition, a great deal of important equipment and supplies landed in the water, and valuable time had to be spent trying to retrieve this equipment. About half of the 508th PIR landed within two miles of the drop zone, but the remainder landed on the other side of the Merderet River or were scattered to even more distant locations. The 507th PIR dropped in a tighter pattern than the 508th, but many aircraft overshot the drop zone, dumping the paratroopers into the swampy fringes of the Merderet River. The most noticeable terrain feature in the area of the 507th PIR drop was the railroad line from Carentan on an embankment over the marshes. Many paratroopers gathered along the embankment.

La Fière bridge

One of the missions of the 507th PIR was to seize the western approaches to the La Fière bridge, which connected the drop zones west of the Merderet River with Ste Mère-Église and the paratroopers on the east side. The bridge was a small stone structure over the Merderet River, but the farmland on the west side of the river had been flooded by the Germans to prevent its use as an airborne landing zone. The connection between the bridge and the hamlet of Cauquigny over the flooded area was a long, tree-lined causeway.

After the first attempt by Lieutenant Wisner of A/505th PIR to rush the bridge, the eastern approaches became a collection point for paratroopers trying to make their way to the west side of the Merderet River, having been wrongly dropped on the eastern side. By mid-morning about 600 paratroopers had coalesced and a force under Captain F. 'Ben' Schwarzwalder from the 2/507th PIR began a house-to-house skirmish to clear the manor farm on the eastern side of the bridge. When General Gavin arrived later, he split the growing force, sending a team of 75 paratroopers south to find another crossing point, while leading a second group of 75 to the bridge at Chef-du-Pont. General Ridgway arrived afterwards, and ordered Colonel Lindquist of the 508th PIR to organize the various groups near La Fière and capture the bridge.

Unknown to the force on the east side of the La Fière bridge, about 50 paratroopers of the 2/507th PIR had attempted to cross the bridge earlier in the morning from the western side. After being forced back by machine-gun fire, they established a defensive position in the Cauquigny church on the other end of the causeway. The attack against the bridge from the east side began around noon and about 80 paratroopers under Schwarzwalder pushed over the causeway and linked up with the platoon on the western side. Schwarzwalder's men were not followed by any other troops, and he decided that they should join up with the rest of their battalion under Lieutenant Colonel Charles Timmes in an orchard in Amfreville to the north-west of Cauquigny. Schwarzwalder left behind about a dozen paratroopers, believing they would be adequate to hold the bridge until other paratroopers from the east side passed over. However, before the force on the eastern side moved more paratroopers across, GR 1057 of the 91st Luftlande Division attacked with the support of a few Hotchkiss H-39 light tanks of Panzer Abteilung 100, quickly regaining control of the western side of the causeway in Cauquigny. As a result, the bridgehead over the Merderet was lost for the next two days and would be the scene of intense fighting.

The group under General Gavin that split off to seize the Chef-du-Pont bridge had no success. The bridge was stubbornly defended by a small number of German troops dug in along the causeway. Gavin's force was ordered back to La Fière to reinforce the main effort, and he left behind an under-strength platoon commanded by Captain Roy Creek to cover the bridge. This unit was nearly overwhelmed by a later German counter-attack, but they were rescued in the nick of time by the unanticipated arrival of a glider carrying a 57mm anti-tank gun, followed by reinforcements from La Fière. The reinforcements allowed Creek's force to clear the Germans off the bridge and cross the river to the west side.

One of the few other coherent operations of the early morning on the west bank of the Merderet involved a force assembled by Lieutenant Colonel Thomas Shanley of the 2/508th PIR near Picauville. His unit's assignment was to destroy the Douve bridge at Pont l'Abbé, but his force quickly came in to contact with a German infantry battalion from GR 1057 involved in sealing off the west bank of the Merderet River. Shanley withdrew his force to the battalion assembly area on Hill 30 and they fought a day-long engagement, shielding the operations of the forces near La Fière.

By the afternoon of D-Day, there were three separated groups of paratroopers in the area around La Fière bridge: about 300 paratroopers with Shanley, 120 with Timmes and Schwarzwalder, and 400 with Colonel George Millett of the 507th PIR on the east side of La Fière. All three groups were short on ammunition, and under intense pressure from GR 1057. As will be detailed later, the fighting for La Fière continued for three days.

Glider reinforcements

The next airborne missions in the early hours of D-Day were the glider reinforcement flights: Mission *Detroit* for the 82nd Airborne Division and Mission *Chicago* for the 101st Airborne Division. Mission *Detroit* left England at 01.20hrs with 52 Waco C-4A gliders carrying 155 troops, 16 57mm anti-tank guns, and 25 jeeps. One of these gliders, carrying the division's SCR-499 long-range radio, was lost shortly after take-off. A second aircraft and glider were lost before reaching Landing Zone E. The overloaded glider carrying the 101st Airborne deputy commander, Brigadier General Donald Pratt, crashed on landing, killing the general. The nighttime landings at 03.45hrs were almost as badly scattered as the paratroopers with only six gliders on target, 15 within three-quarters of a mile, ten further west and 18 further east. Nevertheless, casualties were modest with five dead, 17 seriously injured and seven missing.

The 46 Waco CG-4A gliders of Mission *Detroit* landed at 04.10hrs near the 82nd Airborne's Landing Zone O, carrying 220 troops as well as 22 jeeps and 16 anti-tank guns. About 20 of the gliders landed on or near the landing zone, while seven were released early (five disappearing) and seven more landed on the west bank of the Merderet River. The rough landings in this sector led to the loss of 11 jeeps and most of the gliders, but troop losses were fewer than expected, three dead and 23 seriously injured.

D-DAY GLIDER OPERATIONS, IX TROOP CARRIER COMMAND

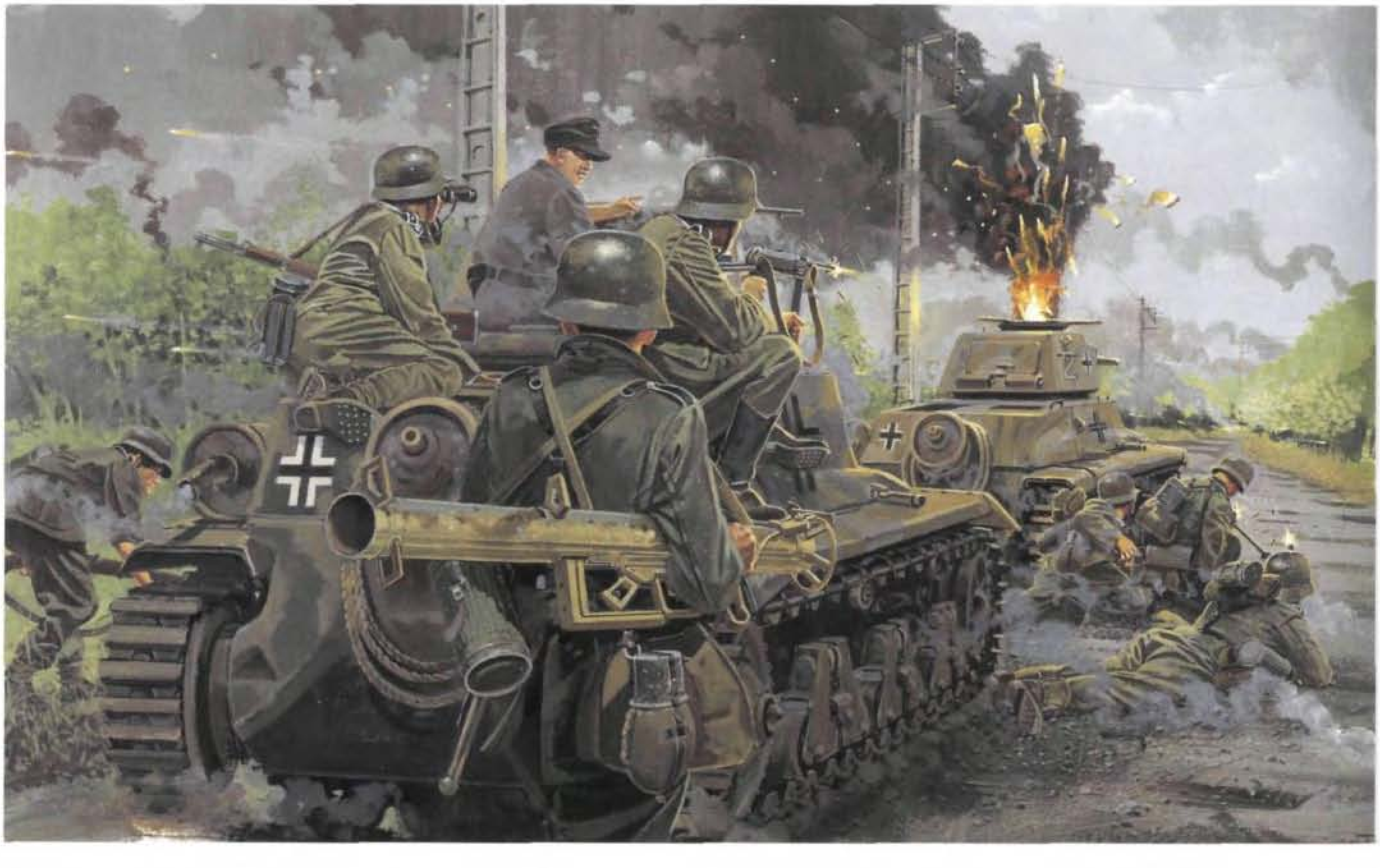
Mission	*Chicago*	*Detroit*	*Keokuk*	*Elmira*	*Galveston*	*Hackensack*	Total
Mission date	D-Day	D-Day	D-Day	D-Day	D+1	D+1	
	04.00	04.07	21.00	21.00	07.00	09.00	
Landing zone	LZ E	LZ O	LZ E	LZ W	LZ W	LZ W	
Tow aircraft sorties	52	52	32	177	102	101	516
Aborted sorties	1	0	0	2	2	0	5
Aircraft lost/missing	1	1	0	5	0	0	7
Aircraft damaged	7	38	1	92	26	1	165
Horsa sorties	0	0	32	140	20	30	222
Horsa sorties aborted	0	0	0	2	2	0	4
Waco sorties	52	53	0	36	84	70	295
Waco sorties aborted	1	1	0	0	2	0	4
Aircrew killed/missing	4	4	0	1	0	0	9
Aircrew wounded	1	3	0	8	0	0	12
Glider pilots despatched	104	106	64	352	208	200	1,034
Glider pilots lost	14	13	0	26	0	3	56
Troops carried	155	220	157	1,190	968	1,331	4,021
Troops landed	153	209	157	1,160	927	1,331	3,937
Waco casualties*	27	30	0	15	35	16	123
Horsa casualties*	0	0	44	142	80	74	340
Artillery carried	16	16	6	37	20	0	95
Vehicles carried	25	27	40	123	41	34	290
Cargo carried (tons)	14	10	19	131	26	38	238

*troops injured/killed during landing

The German reaction

German forces on the Cotentin peninsula were not on alert on the night of 5/6 June 1944 due to the weather conditions mentioned earlier. The first hint of activity came into German intelligence around 23.00–24.00 on 5 June when signals units picked up a coded message to French resistance. Around 23.30hrs, an aircraft warning station at Cherbourg alerted the local command that ship activity and the concentration of transport aircraft at British airfields suggested an invasion was underway. This set in train a number of alerts. The first news of paratroop jumps began arriving at headquarters around 01.30hrs from the area around the Vire River. These alerts increased in number through the early morning hours. One of the sticks of pathfinders landed on top of the regimental headquarters of GR 919, located in a quarry on the road between Quineville and Montebourg. Oberstleutnant Gunther Keil commanded the battalions along the coastline, and found a map on one of the paratroopers that indicated that the main drop would be around Ste Mère-Église. At first, the regimental headquarters believed that the paratroopers were part of a raid, and not a major drop. The Georgian Battalion 795 located east of Ste Mère-Église reported around 03.00hrs that the battalion was surrounded, but Keil was a bit skeptical as the messengers had arrived at the command post without difficulty and an officer of the Georgian battalion arrived safely by car. He gave more credence to a report from a company of the divisional engineers who reported that thousands of paratroopers were landing.

At 84th Corps Headquarters, General Marcks became concerned that the paratroopers might create a gap between the 709th Division at Utah Beach and the 352nd Division at



German counter-attack on the Merderet River, 14.00hrs D-Day. A company of Hotchkiss H-39 tanks of Panzer Abteilung 100 spearheaded the attack, but two were disabled, leaving a surviving pair to take the lead, accompanied by infantry. In this scene, the first tank has been hit by the bazooka teams in ambush position, and the second tank has no room to manoeuvre on either side of the causeway, so is backing away. (Howard Gerrard © Osprey Publishing Ltd)

Omaha. The only major corps reserve was Kampfgruppe 'Meyer' of the 352nd Infantry Division near St Lô. At 03.10hrs, General Marcks ordered Meyer to advance towards the junction of the two divisions between Utah and Omaha beaches. The decision to send the reserves after the paratroopers proved to be premature and a serious mistake. Later in the morning, the force would be badly needed in the opposite direction. As a result, Kampfgruppe 'Meyer' spent most of the morning marching westward, only to have their orders changed a few hours later and shifted in the opposite direction, all the while under air attack.

US paratroopers landed mainly in the deployment area of the 91st Luftlande Division. The reaction of the division was confused, in part due to the absence of senior divisional commanders at the Rennes wargame. General Falley was alerted to the paratrooper landings early in the morning and set out by car to return to his unit. Around dawn, his car was intercepted before reaching his command post by a paratrooper patrol and he was killed after a short skirmish near Picauville. Unaware of Falley's fate and unable to contact him, the division's operations officer, General Bernhard Klosterkemper, took temporary command. On learning that the Americans had seized Ste Mère-Église, he ordered GR 1057 to begin to move east over the Merderet via the La Fière bridge, where the regiment would become entangled with the 82nd Airborne Division over control of the Merderet River crossings.

In the meantime, Oberstleutnant Keil had asked permission from 84th Corps Headquarters to use Major Moch's battalion from GR 1058 of the 91st Luftlande Division located at St Côme-du-Mont to assist him in his own efforts to regain control of Ste Mère-Église from the north. Permission was granted by corps HQ at 03.30hrs and Keil hoped that Moch's battalion would arrive at Ste Mère-Église by 08.00hrs. Instead of moving on the town, Moch's battalion was still in its garrison north of Ste Mère-Église at 08.00hrs and Keil again ordered him to attack the town, without result. Finally, around 11.00hrs, Moch sent a message indicating that the battery at Azeville had been captured and asking Keil if he should retake it. At the end of his patience, Keil told him to follow the previous orders but Moch's battalion did not reach the outskirts of the town until 13.00hrs. By the afternoon, a perimeter defence had already been established and Moch's battalion reinforced the units assaulting Lieutenant Turnbull's platoon outside Neuville, but were unable to overcome the outnumbered but tenacious paratroopers.

The German troops south of Ste Mère-Église, including the remnants of the Georgian Battalion 795, were pressed into a pocket by the paratrooper attacks from the north, and the advance of 4th Division troops from the beaches later in the day. This pocket continued to block the road south of Ste Mère-Église through D-Day.

While Moch's battalion was sluggishly approaching Ste Mère-Église, the corps headquarters ordered a second battalion from GR 1058 to follow it southward to the town. However, it became bottled up around Montebourg. The corps headquarters also activated the Sturmbattalion AOK 7 and sent it along the road from St Floxel to Beuzeville-au-Plain, eventually attacking the US positions on the eastern side of Ste Mère-Église in the afternoon. Elements of the Panzerjäger Company 709 accompanied it, but were lost in the fighting with the paratroopers around Beuzeville-au-Plain.

6th Fallschirmjäger Regiment near Periers was alerted around midnight, and began encountering paratroopers who had landed far south of the intended landing areas. Von der Heydte tried reaching higher command but telephone lines in the area had been cut, probably by the French resistance. The 3/FJR 6 engaged in skirmishes with US paratroopers in the pre-dawn hours, being pushed to the south-east. Von der Heydte finally managed to reach General Marcks around 06.00hrs by using phones at the St Lô post office, and he was ordered to clear the Carentan area of paratroopers and begin moving his regiment northward toward Ste Mère-Église with the objective of eliminating the paratrooper concentrations there. In the days prior to the invasion, Rommel had ordered units in areas vulnerable to paratroop landing to disperse their garrison, and as a result, FJR 6 had a difficult time assembling its troops. Von der Heydte passed through Carentan ahead of his troops, finding the town devoid of German or American troops, and he reached a German battalion dug in near St Côme-du-Mont. He climbed the village church's steeple, giving him a vista of the battlefield all the way to Utah Beach. The vast armada of US ships was clearly visible, and he later recalled that the scene was oddly tranquil, like a summer's day on the shore of the Wannsee near Berlin with little evidence of fighting. This was the first time that a senior German officer learned that the paratrooper attack had been reinforced by a major amphibious landing. As 3/FJR 6 was still engaged with US forces, the other two battalions reached this assembly area in the early afternoon. The 2/FJR 6 was directed to advance on Ste Mère-Église along the main road while the 1/FJR 6 would advance further east to shield the column from US troops landing from the sea. The two advancing battalions moved out around 19.00hrs and had no serious contact with US forces until after nightfall, when both battalions were heavily disrupted by further airborne landings virtually on top of them.

The fate of the I/GR 919 stationed along Utah Beach was not recorded in detail due to its quick rout. Communications between the battalion and the division headquarters were lost before noon on D-Day as US troops captured most of its strongpoints. Of the 13 strongpoints, WN1 to WN14 along the coast, all of the southern strongpoints closest to the US landings were taken by US forces on D-Day. Those further north on the coast, including WN10, WN10a, WN11 and StP12, held out for another day or two, finally surrendering after running out of food and ammunition.

The amphibious landings

Task Force U under Rear Admiral Don Moon reached the transport area off Utah Beach around 02.30hrs and the command ship, USS *Bayfield*, dropped anchor. There was no significant German naval activity in the area even though Admiral Krancke had issued orders to repel the invasion force after shore radar had located the oncoming invasion fleet at 03.09hrs. Two torpedo boat flotillas operating out of Cherbourg encountered heavy seas, and returned to port before dawn without engaging the Allied landing force. The first actions of the day began around 05.05hrs, when German coastal batteries began to open fire on Allied shipping as it crossed the horizon. The Morsalines battery of 6/HKAA 1261 with six French 155mm guns had been located in concrete emplacements near St Vaast, but due to air attacks, was moved to open ground near Videcosville. It began engaging a minesweeper, prompting HMS *Black Prince* to respond. The Marcouf battery of 3/HKAA 1261 and the neighbouring 4/HKAA 1261 engaged the destroyers USS *Corry* and *Fitch*. While manoeuvring to avoid the fire, the *Corry* struck a mine amidships, cutting it in two. The destroyers *Fitch* and *Hobson* pulled alongside while keeping the coastal batteries under fire. The Marcouf battery was subjected to the most intense fire, first by the cruiser *Quincy* and then by the battleship USS *Nevada*. *Nevada* scored a direct hit on one of the four bunkers with a 5in round, but it was a dud, passing through the bunker and out the other side. The battery lost the first of three guns in the early morning exchange, the second at 15.57 and the last at 18.30hrs.

The preliminary naval bombardment of the beach began at H-40 (05.50hrs). As H-hour approached, the fire was redirected toward flank targets, especially remaining German naval batteries in the area. Utah Beach was scheduled for a preliminary air bombardment by IX Bomber Command. Although cloud cover threatened to disrupt the bombardment, the attacking B-26 Marauder pilots decided to drop below the prescribed altitude to 3,500–7,000ft (1,066–2,134m). A total of 269 bombers took part, dropping 525 tons of 250lb (113kg) bombs between 06.05 and 06.24hrs. This was in complete contrast to Omaha Beach, where the bombers remained above the cloud cover, and ineffectively dropped their bombs far behind the beach using blind-bombing tactics. Besides the bombardment of the beach itself, a further 33 aircraft dropped 47 tons of bombs on the coastal artillery batteries near Maisy and Gefosse.

The preliminary bombardment proved to be extremely effective in suppressing the German defences at the WN5 strongpoint. Most of the open gun pits had been knocked out by the attacks, and even some of the enclosed bunkers had collapsed or were seriously damaged. One of the few defence positions intact was the well-protected Bauform 667 casemate on the southern fringe of WN5. Although casualties from the bombardment had been low, many of the German defenders were stunned by the bomb blasts and naval gunfire.

The first landing actually occurred two hours before the main landings. Activity had been spotted on the St Marcouf islands off Utah Beach in May, so a cavalry detachment of 132 men from the 4th and 24th Cavalry Squadrons were sent ashore at 04.30hrs. In fact, there were no German troops on the islands, but minefields and later German artillery fire killed two and wounded 17.

As on Omaha Beach, the preliminary force ashore was scheduled to be amphibious Duplex Drive M4A1 medium tanks. The 32 tanks from the 70th Tank Battalion were carried toward their launch point on board eight LCTs. The run toward the beach was slowed by the headwind and steep chop. At 05.21hrs, one of the two control craft guiding in the force struck a mine and sank, followed 15 minutes later by an LCT. The naval

Company C of the 70th Tank Battalion goes ashore at Utah Beach in the third wave. The first two companies of the 70th Tank Battalion used DD tanks, while this company used deep-wading trunks.

control officer realized that the force was behind schedule, and to speed the landing, the LCTs launched the tanks from closer to shore than planned, from about 1,500yd (1,300m) instead of 5,000yd (4,550m). Even so, the 28 DD tanks arrived ten minutes after the first wave of troops.

The assault force for Utah Beach was Combat Team 8, formed from the 8th Infantry of the 4th Infantry Division, along with supporting engineers and other specialist troops. The initial two waves consisted of two assault battalions, more heavily equipped than normal infantry, landing in LCVPs. The first wave included 20 LCVPs with 30 troops each. The offshore current pushed the craft somewhat to the south, and the landmarks on shore were difficult to see due to the smoke caused by the heavy bombardment. As a result, the first wave of the assault force landed about 2,000yd (1,800m) south of the intended objective around Exit 3 and Les Dunes de Varreville, landing instead near Exit 2 and the Grande Dune. The navigational error had little effect on the operation, and if anything permitted an easier landing as it transpired that there were fewer beach obstructions in this sector and the German strongpoints were less substantial. Instead of facing two major German strongpoints on the intended beach, the landing faced only a single strongpoint that had been pulverized by the aerial bombing. Several company-sized task forces set about reducing the German strongpoints along the beach, which was accomplished without difficulty aided by the newly arrived DD tanks. The tanks quickly knocked out the surviving bunkers, and began breaching the seawall using gunfire. The commander of the German defences, Leutnant Jahnke, ordered the Goliath remote control vehicles to be launched against the tanks and landing craft, but the bombardment had severed the wire guidance cables to their hidden nests.

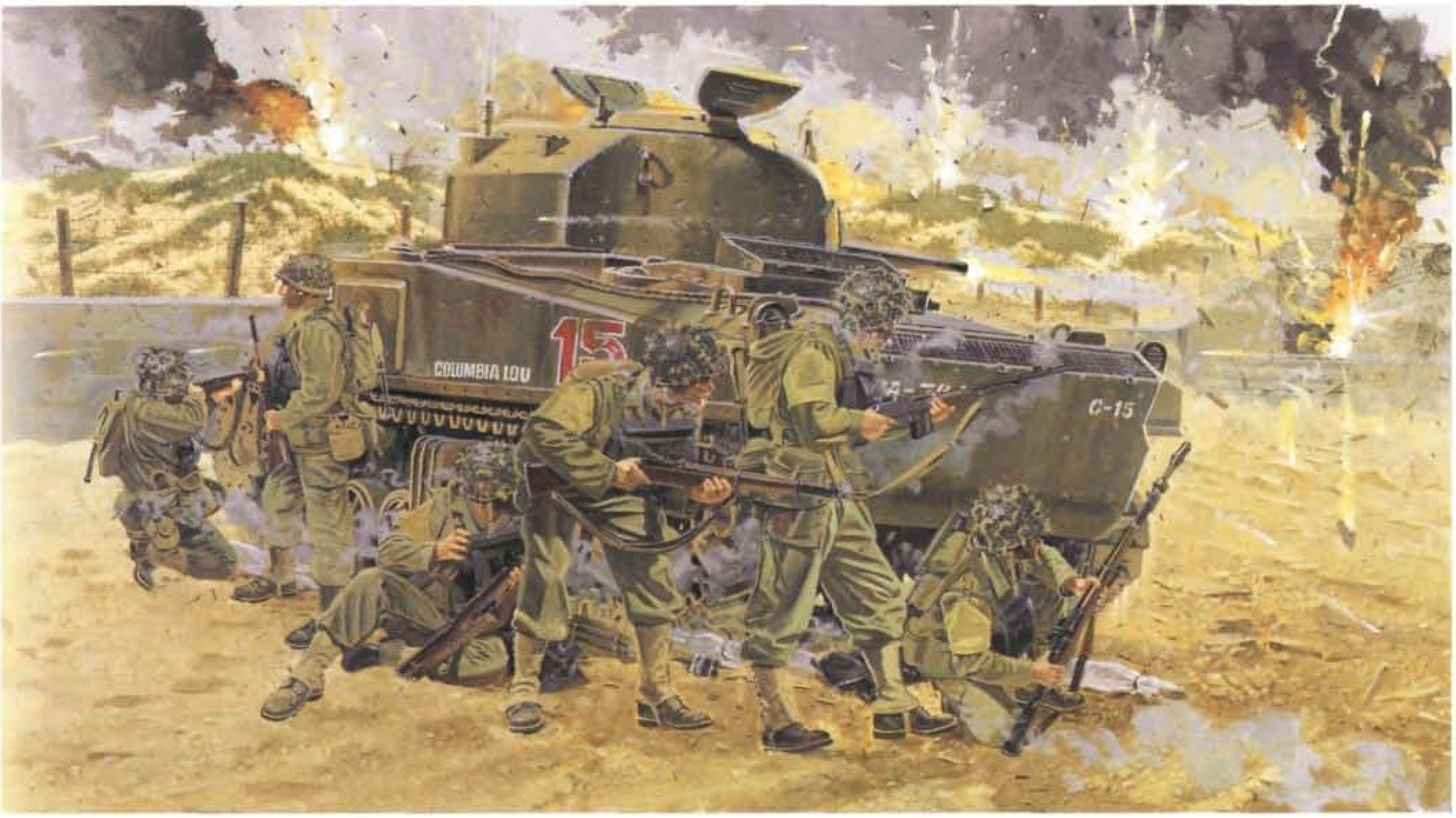
The first assault wave was followed by 32 more LCVPs containing the remainder of the two assault battalions along with engineer and naval demolition parties. The demolition

German resistance on Utah Beach was quickly overwhelmed except for sporadic artillery shelling from distant coastal batteries. This view from a Coast Guard LCVP shows troops wading ashore with an LCI beached to the left. The barrage balloons were intended to prevent low-altitude strafing by German aircraft.

teams set about destroying beach obstructions to permit the landing of additional craft once the tide had turned. The engineers began to tackle the problem of minefields along the beach, and also used explosive charges to blow gaps in the seawall to allow the troops speedier passage off the beach. The third wave at H+15 consisted of eight more LCTs containing Company C from the 70th Tank Battalion using M4 tanks fitted with wading trunks as well as four dozer-tanks to assist in the beach-clearing operation. The fourth wave consisted mainly of detachments from the 237th and 299th Engineers to assist in clearing the beaches. Two additional battalions, 3/8th Infantry and 3/22nd Infantry also followed. By this stage, German fire was limited to sporadic artillery. Most of the German defenders surrendered quickly, but Jahnke was not pulled from his command bunker until around noon during the clean-up operations.

The first senior officer on the beach was General Theodore Roosevelt Jr, the 4th Division's assistant commander. On realizing they had landed on the wrong beach, he personally scouted the exits to determine which causeway to use to exit the beach. Roosevelt met with the two infantry battalion commanders and instructed them to eliminate remaining German defences and move out over the Exit 2 causeway. By 09.00hrs, the defences behind the beach had been reduced and the 8th Infantry was moving inland, led by tanks from the 70th Tank Battalion. On the way down the causeway, the Germans had set off a demolition charge under a small culvert, creating a gap in the road. The lead tank had mechanical problems, stalling the second tank, which was struck by an anti-tank gun. The third tank quickly eliminated the gun and engineers from the Beach Obstacle Task Force brought up a length of treadway bridge to cover the gap. Due to congestion on the causeway, some units moved across the flooded tidal pools behind the beach.

Combat Team 8 on Utah Beach, 07.30hrs D-Day. The mission of the tanks on the beach was to help the infantry in overcoming any beach defences, and to assist in exiting the beach by blasting the seawall with their guns. Here 'Colombia Lou', one of the company's M4 medium tanks, engages a German Bauform 667 bunker, with GIs from the 8th Infantry taking cover behind the advancing tank. (Howard Gerrard © Osprey Publishing Ltd)



The 1/8th Infantry moved north from the causeway and reached Turqueville by evening without encountering any serious resistance. The 3/8th Infantry headed directly west from the causeway, and ran into elements of the 14th Company of GR 919, the regimental anti-tank unit, with a platoon of 75mm anti-tank guns deployed in field positions along with infantry from the I/GR 919. A short fire-fight ensued in which about 50 Germans were killed and about 100 surrendered. The battalion reached the area north of Les Forges and sent out a platoon to link up with the 82nd Airborne Division near Chef-du-Pont. The 2/8th Infantry headed south toward Pouppeville along the seawall rather than crossing the causeway. There was almost continuous skirmishing with isolated German riflemen along the coast, but the battalion overwhelmed the weakly defended WN2a strongpoint and made their way to Exit 1 and the road junction near Pouppeville. They linked up with Colonel Ewell of the 3/501st PIR who had already cleared the town of troops from GR 1058. Besides the actions by the 8th Infantry, A/49th Engineer Combat Battalion was assigned to seize a lock near Grand Vey that controlled the flooding of the tidal pools. In the process, they took about 125 German prisoners.

The remainder of the 4th Infantry Division landed on D-Day, along with the first elements of the 90th Division. Both the 12th and 22nd Infantry were directed toward the northern side of the beachhead area. Starting from a position further south than the planned landing area, they did not reach their objectives on D-Day. They formed a defensive perimeter emanating westward from St Germain-de-Varreville towards Ste Mère-Église.

Reinforcement of the airborne divisions continued through the day. Howell Force, a reserve of troops from 82nd Airborne Division under Colonel E. Raff, landed by sea and followed 3/8th Infantry, planning to join up with their parent unit. On reaching the area near Les Forges where the 3/8th Infantry had set up its nighttime bivouac, Raff was told that the infantry planned to advance no further that night as they were already in possession of their objective and had run into German defences north of their position. Raff wanted to link up with airborne forces in Ste Mère-Église, and was also concerned about the safety of Landing Zone W, the destination of Mission *Elmira*, another glider supply effort. Attempts to budge the German defences had not succeeded by the time that the gliders appeared over the landing zone around 21.00hrs, and the fields were in no man's land. The first wave consisted of 54 Horsa and 22 Waco CG-4A gliders with 437 troops, 64 vehicles, 13 57mm anti-tank guns and 24 tons of supplies. In the declining light, the gliders landed under fire from scattered German positions. The main hazard was the difficulty of landing the gliders in confined farm fields at dusk, and many gliders crashed on landing. The casualties were surprisingly light considering the circumstances. The second wave of the *Elmira* mission, consisting of 86 Horsa and 14 Waco CG-4A gliders, landed about an hour and a half later in Landing Zone O north of Ste Mère-Église. The third and smallest glider landing of the evening, Mission *Keokuk*, crunched into Landing Zone E, west of Hiesville.

D-Day at midnight

By midnight on D-Day, Utah Beach was securely in American hands and the 4th Infantry Division had reached its initial objectives, at a very modest cost, only 197 casualties. The startling contrast in the casualties compared to the more than 2,000 suffered on neighbouring Omaha Beach were due to the weak defences on Utah Beach and the total disruption of German defences by the airborne landings. Omaha Beach was defended by 11 strongpoints instead of the one at Utah, and the defending forces there had 26 anti-tank guns and field guns aimed at the beach compared to only five at Utah Beach. There was a similar discrepancy in machine-guns and mortars. In addition, the Utah Beach bunkers were heavily damaged by the preliminary bombardment, while the Omaha bunkers were never bombed. Utah Beach was defended by only about a company of infantry, while Omaha Beach had portions of two infantry regiments. Tanks also landed in force on Utah, with nearly three intact companies on the beach in the opening hour of the fighting.

The air landings by the 82nd and 101st Airborne Divisions had not gone according to plan, due to dispersion of the drops. Only about 10 per cent of the paratroopers landed on their drop zones, a further 25 per cent within a mile, and another 20 per cent within 2 miles. The remainder were more scattered: about 25 per cent were within 5 miles, 15 per cent were between 5 and 25 miles from their drop zones, and about 5 per cent were missing. By dawn, the 82nd Airborne Division had only about 1,500 paratroopers near their divisional objectives and the 101st Airborne had only about 1,100. By midnight, the situation was not much better, only about 2,000 under divisional control with the 82nd and 2,500 with the 101st Airborne Division of the 13,350 dropped. While the serious dispersion accounts for the problems in the morning, the continued difficulties collecting troops during the course of the day were due to the unexpected isolation of small groups of paratroopers by the maze of hedgerows and flooded farmlands and the lack of sufficient radios to link the dispersed groups. Casualties sustained by the airborne units on D-Day have never been accurately calculated as so many troops were missing for days afterwards. Nevertheless, it is evident that casualties in these units were considerably higher than those

Troops of the 8th Infantry, 4th Division, move over the dunes at Utah Beach while other soldiers remain along the seawall. Utah Beach was free of the high bluffs that plagued the landings at the neighbouring Omaha Beach.

suffered by the 4th Infantry Division during the beach landings. Indeed, total casualties in the Utah sector were comparable to the 2,000 casualties on Omaha Beach, but a significant portion of these casualties were paratroopers captured by the Germans and non-combat injuries sustained during the night drops.

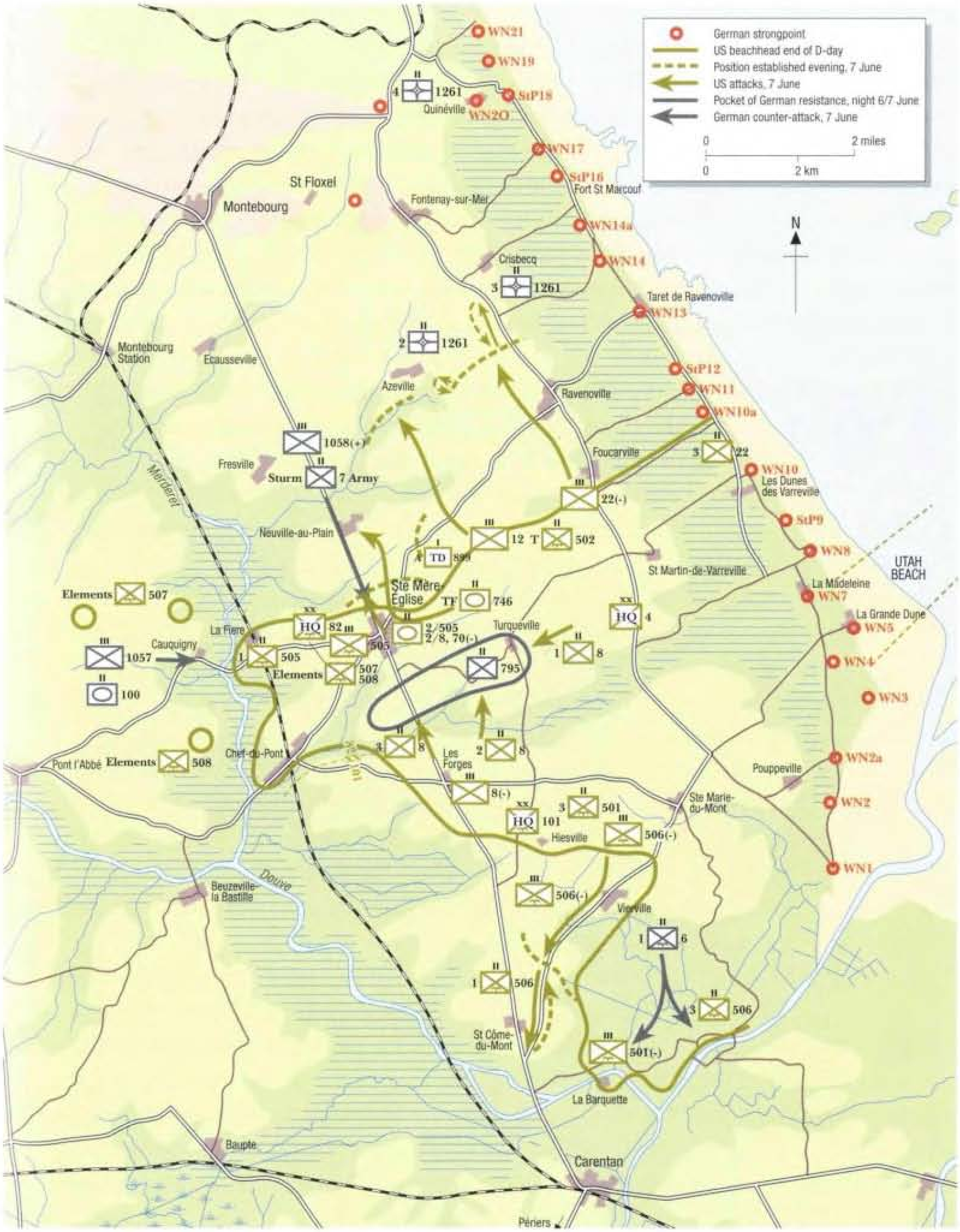
As a result of the difficulties in assembling the paratroopers, the objectives of the airborne divisions were not met on D-Day. The airborne divisions did secure some of the access routes off the beach, but the only causeway that really mattered was seized by the 8th Infantry. Bridges over the Merderet were not secured, and large portions of the 82nd Airborne remained cut off on the west side of the river. Equally worrisome, the airborne divisions did not manage to create an effective defensive screen on the southern edge of the VII Corps lodgement, leaving the bridgehead vulnerable to attack by German reserves. This had no consequence due to the weak German response.

By the perverse logic of war, the airborne assault actually did accomplish its mission even if specific objectives were not achieved. The paratroopers were so widely scattered that they disrupted and tied down most German forces on the eastern side of the Cotentin peninsula. If the US airborne commanders were unhappy over their failures, the German senior commanders were baffled. Some German officers believed that the airborne assault represented a clever new tactical approach they dubbed 'saturation attack', intended to disrupt defensive efforts by the German Army rather than to control specific terrain features. Although the Germans may have been impressed by the airborne landings, senior Allied leaders were not. The problems with the Normandy landings convinced them that nighttime landings were inherently too risky given the limitations of contemporary navigation technology, and subsequent Allied airborne operations were conducted in daylight.

German defensive operations on D-Day had been passive and unsuccessful. The vaunted Atlantic Wall in this sector had been breached within an hour with few casualties. The combat

Troops from the 8th Infantry wade through some of the inundated farm fields behind Utah Beach. The cylindrical devices the two lead GIs are carrying are their inflated flotation belts. These troops are also carrying the distinctive assault gas-mask bags so typical of the Normandy landings.

performance of German infantry units, not surprisingly, was quite mixed. Some units, such as GR 1057 along the Merderet, attacked and defended with tenacity and skill. Many of the static defence units surrendered to the paratroopers even though they outnumbered the attackers, especially those with conscripted Poles and 'volunteer' Soviet prisoners. In general, the Utah Beach sector received relatively little attention from German corps and army headquarters due to the perception that other sectors were far more dangerous, especially the British beaches. Indeed, it was not apparent to senior German commanders until late in the day that a major amphibious landing was under way at Utah Beach.


German strongpoint
US beachhead end of D-day
Position established evening, 7 June
US attacks, 7 June
Pocket of German resistance, night 6/7 June
German counter-attack, 7 June
0
2 miles
0
2 km
N
WN21
WN19
StP18
WN20
Quinéville
4 1261
WN17
StP16
Fort St Marcouf
St Floxel
Montebourg
Fontenay-sur-Mer
WN14a
WN14
Crisbecq
3 1261
Taret de Ravenoville
WN13
2 1261
Montebourg Station
Ecausseville
Azeville
StP12
WN11
WN10a
Ravenoville
1058(+)
Foucarville
3 22
Fresville
Sturm 7 Army
Merderet
22(-)
WN10
Les Dunes des Varreville
StP9
Neuville-au-Plain
12 T
502
TD 899
WN8
St Martin-de-Varreville
UTAH BEACH
La Madeleine
WN7
Ste Mère-Eglise
TF 746
Elements 507
HQ 82
HQ 4
La Grande Dune
WN5
La Fière
Cauquigny
2/505
2/8, 70(-)
Turqueville
1 8
505
1057
1 505
Elements
507
508
795
WN4
100
WN3
Pont l'Abbé
Elements 508
Chef-du-Pont
3 8
2 8
Les Forges
Pouppeville
WN2a
8(-)
Ste Marie-du-Mont
WN2
HQ 101
3 501
506(-)
Hiesville
WN1
Beuzeville-la Bastille
Douve
506(-)
Vierville
1 6
1 506
3 506
St Côme-du-Mont
501(-)
La Barquette
Baupte
Carentan
Périers

Securing Utah Beach, 7 June 1944.

Consolidating the beachhead

General Collins, commander of VII Corps, realized that his first mission would be to consolidate the beachhead area due to the lingering dispersion of the paratroop forces. He was still not in touch with General Ridgway from the 82nd Airborne Division, and the first communications were not received until late on D+1. The primary mission of the day was to eliminate the German pocket south of Ste Mère-Église, and to relieve the pressure on the northern sector of the town's defences. The pocket contained the remnants of the Georgian Battalion 795 and GR 919. By dawn, the 8th Infantry was poised along its southern and eastern flank, and attacks began that morning. Although the Georgians resisted the initial attacks, a Russian-speaking GI was able to convince them to surrender. About 250 troops gave up to the 1/8th Infantry. The two other battalions of the 8th Infantry had a much harder fight against German units holding a ridge that covered the access road to Ste Mère-Église, but this was overcome, and the two battalions fought their way into town. In the meantime, Collins had already ordered a column of tanks of C/746th Tank Battalion to Ste Mère-Église along the eastern road, and these arrived in time to beat back an early afternoon attack by GR 1058, supported by StuG III assault guns. The 82nd Airborne was reinforced during the day by additional air-landings of the 325th Glider Infantry at 07.00 and 09.00hrs in the Les Forges area. Fighting continued around the La Fière bridge, with the paratroopers repulsing German attacks. But at the end of D+1, a substantial portion of the 82nd Airborne Division remained cut off on the western side of the Merderet. Nevertheless, the fighting on D+1 solidified the 82nd Airborne positions on the eastern bank, with the division now in firm control of Ste Mère-Église and connected to the seaborne invasion force.

The other two regiments of the 4th Division pushed northward out of the beachhead along the coast. The most difficult fighting took place around the fortified German coastal gun positions at Azeville and Crisbecq. Although the two regiments were able to push about two miles northward during the day, they were unable to overcome the two fortified areas and suffered heavy casualties. The 3/22nd Infantry advanced along the coast and reduced the surviving German beach strongpoints. Naval fire-control parties helped direct the gunfire of warships against the bunkers. By the evening of D+1, the battalion had fought its way through all of the German defences up to WN11 when it was ordered inland to serve as a reserve for the other two battalions of the 22nd Infantry that had been battered that day in the fighting with the coastal artillery fortifications. While moving across the inundated tidal flats westward, a German prisoner reported that most of his comrades in the WN13 strongpoint wanted to surrender after a day of pounding from naval gunfire. As a result, the 3/22nd Infantry swung behind WN11 and occupied WN13 further to the north, leaving behind a company to prevent the garrison of WN11 from escaping. This strongpoint surrendered the following day.

The 101st Airborne Division was involved for most of D+1 in securing the southern flank of the beachhead, especially around St Côme-du-Mont and the Douve River north of Carentan. Two battalions of German paratroopers from FJR 6 had been advancing through this area on D-Day, with 1/FJR 6 reaching the area of Ste Marie-du-Mont and 2/FJR 6 reaching within a mile of Ste Mère-Église from the east. Von der Heydte, after seeing the scale of the American operation, realized that his attack on Ste Mère-Église with a mere two battalions was a fool's errand, and during the night of 6/7 June, ordered both battalions to withdraw. The 2/FJR 6 received the order and withdrew but the other battalion did not respond. It belatedly withdrew southward during D+1 toward the rear of the defensive positions of the 101st Airborne Division along the Douve River. It nearly bumped into a column from 1/506th PIR heading out of Vierville, but the American column hesitated to fire as the identity of the force was very unclear. By late afternoon, about 300 German paratroopers from the 1/FJR 6 began approaching the rear of Captain Shettle's force of about 100 paratroopers from 3/506th PIR. The American paratroopers responded with a series of aggressive patrols that convinced the Germans they were facing a much superior force. About 40 Germans were killed in the skirmishes, but platoon-sized units began surrendering, eventually totalling 255 men by evening, outnumbering their captors by a large margin. The remainder of the 1/FJR 6, numbering about 500 German paratroopers, began approaching the defensive perimeter held by 250 paratroopers under Colonel Johnson who were positioned near the La Barquette locks and the Le Port bridge. Not realizing that US forces held the area, the German paratroopers marched carelessly into an ambush and were halted by a blast of small-arms fire at 350 yards. Skirmishing followed, and Johnson finally sent an ultimatum, ordering the Germans to surrender or be annihilated by his 'superior forces'. Small groups of German paratroopers began surrendering and by nightfall about 150 Germans had been killed or wounded, and another 350 surrendered at a cost of ten US paratroopers killed and 30 wounded. Only 25 German paratroopers survived the débâcle and made it over the river to Carentan.

LOCATION
AUTOMOBILE
VOITURE
PORTABLE
CUISINE
SOIGNEE
TELEPHONE N°16

Troops from Utah Beach pass through Ste Mère-Église on 10 June while infantrymen cast a wary glance for snipers. Their uniforms indicate that these are troops of the 4th or 90th Division rather than paratroopers. There were still isolated German soldiers near the beach for several days after the landings.

While this fighting was going on, other elements of the 101st Airborne were making their way toward St Côme-du-Mont in a series of small skirmishes with the Sturmabteilung AOK 7 and elements of 3/FJR 6. By the end of the day, the force around St Côme-du-Mont included five airborne battalions, two artillery battalions and a company of light tanks. These would form the core of an assault force to strike south to the key town of Carentan to help link up Utah and Omaha beaches.

Although the VII Corps had made solid progress on D+1, it was still behind schedule. Under the original plan, Collins had hoped that the 4th Division could rapidly exit the beachhead and begin advancing north toward Cherbourg. However, the fighting was progressing much more slowly than hoped due to the inability of the 82nd Airborne Division to control the Merderet River crossings, the unexpected difficulties of infantry combat in the coastal hedgerows, and the three-day delay in consolidating the badly scattered paratroopers. During a visit to Normandy on D+1, Eisenhower expressed his concern to Bradley that the Germans might exploit the gap between the V Corps on Omaha Beach and the VII Corps on Utah. As a result, Bradley instructed Collins to focus his immediate attention on closing this gap by seizing Carentan.

Rommel had originally believed that the main Allied effort was on the Calvados coast, especially in the British sector around Caen. On 8 June he received a set of orders for the US VII Corps that had been found by a German unit near Utah Beach. This made it clear that the Allies intended to push northward out of Utah Beach toward Valognes and eventually take Cherbourg. As a result, he diverted a first-rate unit, the 77th Infantry Division, which had been intended to prevent the link-up of Omaha and Utah beaches, and ordered it instead into the Cotentin peninsula to reinforce the Cherbourg front. The task of preventing the link-up of the two American beaches in the Carentan sector was assigned to the new and inexperienced 17th SS-Panzergrenadier Division 'Gotz von Berlichingen'.

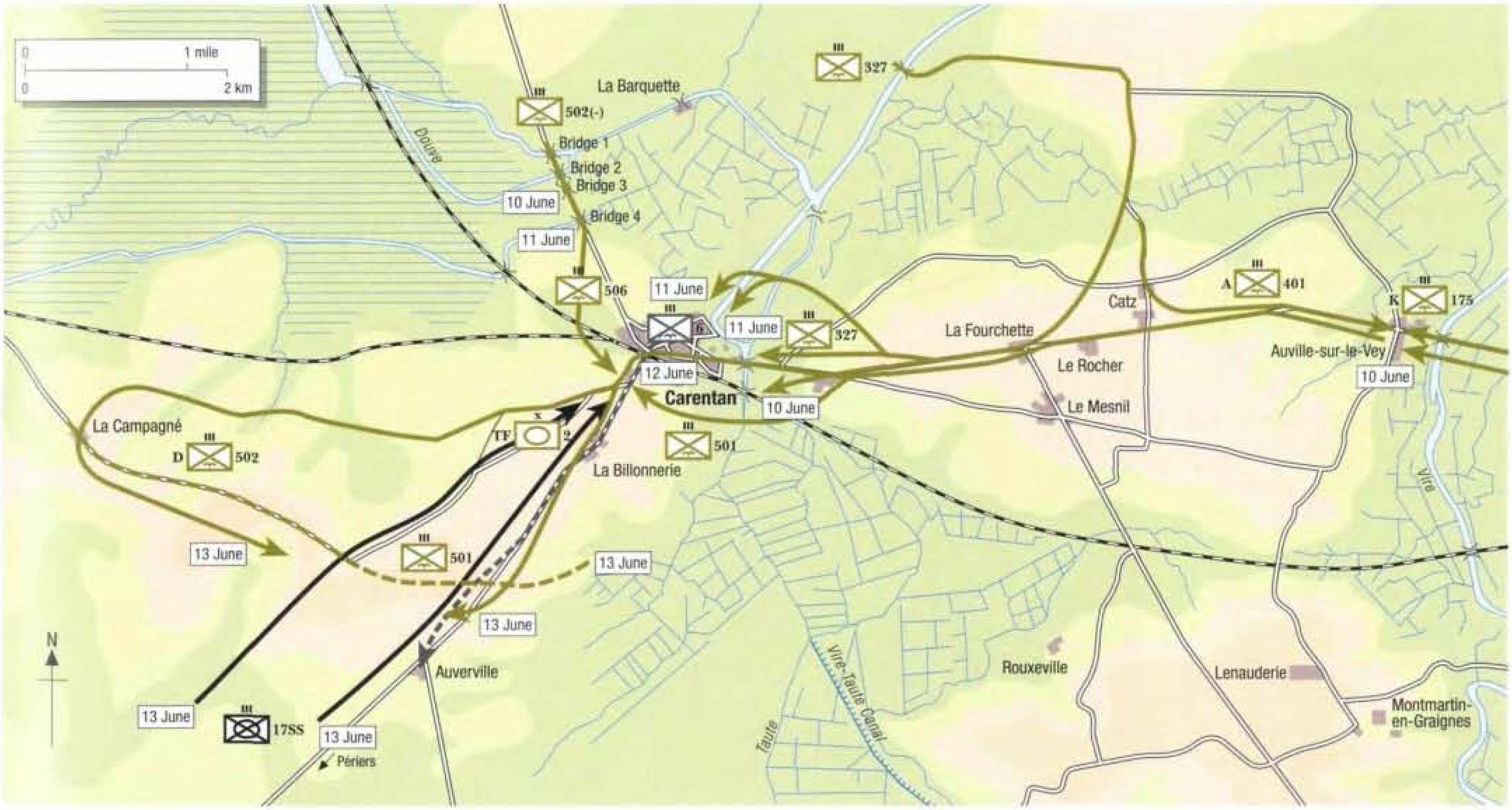
The battle for Carentan

The force attacking Carentan was placed under command of Brigadier General Anthony McAuliffe, better known for his later role in the defence of Bastogne. The plan was to seize St Côme-du-Mont, which controlled the highway to Carentan. The defence of Carentan fell mainly to the two surviving battalions of FJR 6 under Oberstleutnant von der Heydte. He gathered a number of withdrawing German infantry companies to the defence, and on 9 June the corps attached a further two Ost battalions, which he deployed on the eastern side of the town due to their dubious potential.

After a preliminary artillery preparation on the morning of 8 June, one glider infantry and three paratroop battalions began the assault. The survivors of Sturmabteilung AOK 7 began to retreat out the west side of St Côme-du-Mont, but then veered southward toward the main road, colliding with the 3/501st PIR. A series of skirmishes ensued that were finally settled when two more paratroop battalions pushed past the town. By the end of the day, McAuliffe's forces had gained control of the northern side of the causeway leading to Carentan over the Douve and Madeleine rivers. The nature of the fighting that ensued was determined by the terrain. The area on either side of the causeway consisted of marshes and flooded farmland that was mostly impassable to infantry. As a result, the fighting had to be conducted down the narrow causeway itself and across each of its four bridges. The retreating German force had blown the first bridge over the Douve River, and so the advance along the bridge did not begin until the night of 9/10 June while the engineers attempted to span the gap. A boat patrol that night reached as far as the fourth and final bridge over the Madeleine River, but came under intense fire from Carentan. An artillery barrage preceded the attack by the 3/502nd PIR in the early evening of 10 June. The battalion was stretched out in a thin column from the second to fourth bridge, when German machine-gunners began to open fire. Advance across the Madeleine River bridge was inhibited by a Belgian gate obstacle that the paratroopers had managed to move, creating a single 18in (46cm) gap. As a result, only one soldier at a time could pass over the bridge. The fighting continued after dark, and was marked by a strafing run by two Luftwaffe aircraft, a rare appearance in the Normandy skies.

By dawn, about 250 paratroopers had reached the final Madeleine bridge, which was overlooked by a stone farmhouse. At 06.15hrs, Colonel Cole and the battalion executive officer, Major John Stopka, led a bayonet charge by 70 paratroopers into the farm. Although the farm was taken, by this stage the 3/502nd PIR had taken such heavy casualties that the 1/502nd PIR was brought forward to carry on the attack. In fact, the position was so tenuous that the 1/502nd could do no more than reinforce Cole's men to hold the farm against repeated German counter-attacks. An afternoon attack almost succeeded in overwhelming the US paratroopers, but an artillery barrage placed almost on top of the American positions broke the German attack. Around 20.00hrs, the 2/502nd PIR was brought forward to relieve the other two battered battalions. By now, von der Heydte's German paratroopers were beginning to show the strain of combat as well, experiencing serious shortages of machine-gun ammunition and receiving few reinforcements. All rifle ammunition was collected and turned over to the machine-gun crews, and the paratroopers were forced to rely on pistols,

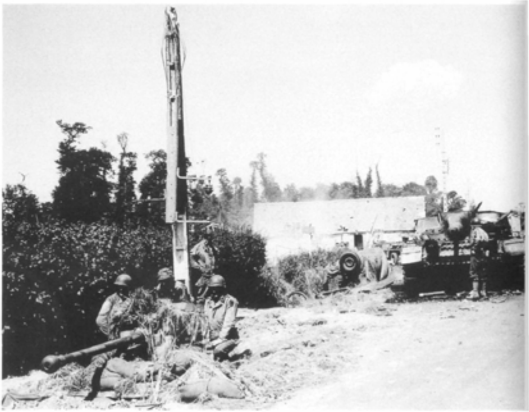
Battle for Carentan, 10–13 June 1944.


0
1 mile
0
2 km
Douve
La Barquette
III
502(-)
Bridge 1
Bridge 2
Bridge 3
10 June
Bridge 4
11 June
III
506
11 June
III
6
11 June
III
327
12 June
Carentan
10 June
III
327
La Campagné
III
D
502
TF
X
2
III
501
La Billonnerie
13 June
III
501
13 June
13 June
N
Auverville
13 June
III
17SS
13 June
Périers
Taute
Vire-Taute Canal
La Fourchette
Catz
Le Rocher
Le Mesnil
III
A
401
III
K
175
Auville-sur-le-Vey
10 June
Vire
Rouxeville
Lenauderie
Montmartin-en-Graignes

grenades or whatever else was at hand. A request to airlift small-arms ammunition to the beleaguered garrison was granted on 11 June, but the drop zone was in a field nearly 9 miles (14km) behind the front, taking time to collect and distribute.

During the two days of intense fighting by the 502nd PIR along the causeway, the 327th Glider Infantry had crossed the Douve further east in the early morning hours of 10 June. It was then reinforced by 1/401st Glider Infantry, which began moving south to seize the roads leading out of Carentan toward the east. One of its companies moved east toward Isigny, meeting up with scouts from the 29th Division, marking the first contact between Utah and Omaha beaches. By the end of 10 June, the 327th Glider Infantry set up a defensive perimeter covering the east side of Carentan, where it was joined by elements from the 401st Glider Infantry. In contrast to the frustrating assault over the causeway, this advance proceeded so well that McAuliffe ordered the 501st PIR to reinforce the glider infantry on 11 June in preparation for a final assault on 12 June. The situation of the German garrison had become so perilous that on the afternoon of 11 July, von der Heydte decided to withdraw his force rather than face certain annihilation. During a lull in the fighting in the late afternoon, the garrison began to slip out to the south-west.

The attack on the city in the early morning hours of 12 July consisted of a drive by the glider infantry from the north-east directly into Carentan and a pincer movement by the 501st and 506th PIR to cut the roads to the south-west to prevent the garrison from escaping. The city was captured quickly, but aside from a small rearguard, the garrison had already withdrawn. After Carentan was taken, the VII Corps set about reinforcing the connections with V Corps to the east.



After von der Heydte's battered FJR 6 retreated out of Carentan, the 17th SS-Panzergrenadier Division tried to retake the town on 13 June 1944. In the foreground is a 57mm anti-tank gun of the 82nd Airborne while behind it to the right is one of the StuG IV assault guns of 1st Company, SS-Panzer Abteilung 17 that was knocked out during the fighting about 3.5km (2.2 miles) outside Carentan on the Periers road near the crossroads with the D223 leading to Baupte and La-Haye-du-Puits. The paratroopers used the light-weight airborne Mk 3 version of the British 6pdr instead of the standard US Army 57mm anti-tank gun.

As von der Heydte's paratroopers made their way south-west from Carentan on 11 July, they bumped into the lead elements of the 17th SS-Panzergrenadier Division. Von der Heydte later claimed that he had not been informed of the reinforcement, but senior German commanders blamed him for the unauthorized and premature abandonment of the city after he had been informed several times about the plans. Generalleutnant Max Pemsel, the Seventh Army Chief of Staff, later wrote that von der Heydte had suffered a temporary mental and physical breakdown due to the savage and uninterrupted fighting of the previous several days. The only reason he was not relieved for such a 'misguided' decision was the outstanding performance of his outnumbered regiment up to that point.

The 17th SS-Panzergrenadier Division had been formed in November 1943, and was not complete when sent into action in June 1944. Although near strength in personnel, it had only about 60 per cent of its officers and NCOs, and was very short of motor transport. The divisional commander, SS-Gruppenführer Werner Ostendorf, decided to retake Carentan by attacking down two roads on the western side of city. The attack would not be preceded by reconnaissance or artillery fire in order to gain tactical surprise, and would be spearheaded by SS-Panzer Abteilung 17 equipped with 48 StuG IV assault guns. Ostendorf felt that the sudden appearance of large numbers of armoured vehicles would carry the day since, to date, the fighting in this sector had been conducted by light infantry on both sides with few anti-tank weapons. The Panzers would serve as the spearhead for the main attack by SS-Panzergrenadier Regiment 37.

McAuliffe had planned to deploy the 506th PIR into the same area on the morning of 13 June to deepen the defences, but they had not begun to advance when the German attack began around 07.00hrs. The German columns started from the divisional assembly areas, and due to the congestion on the country roads, the advance was slow in progressing. No contact was made with the paratroopers until around 09.00hrs when the lead StuG IV assault guns had approached to within 875 yards (800m) of the south-western side of Carentan. In the confined terrain south-east of the city, the 506th PIR was able to slow the attack by using the hedgerows to good effect. They were reinforced by the 2/502nd PIR on the right flank.

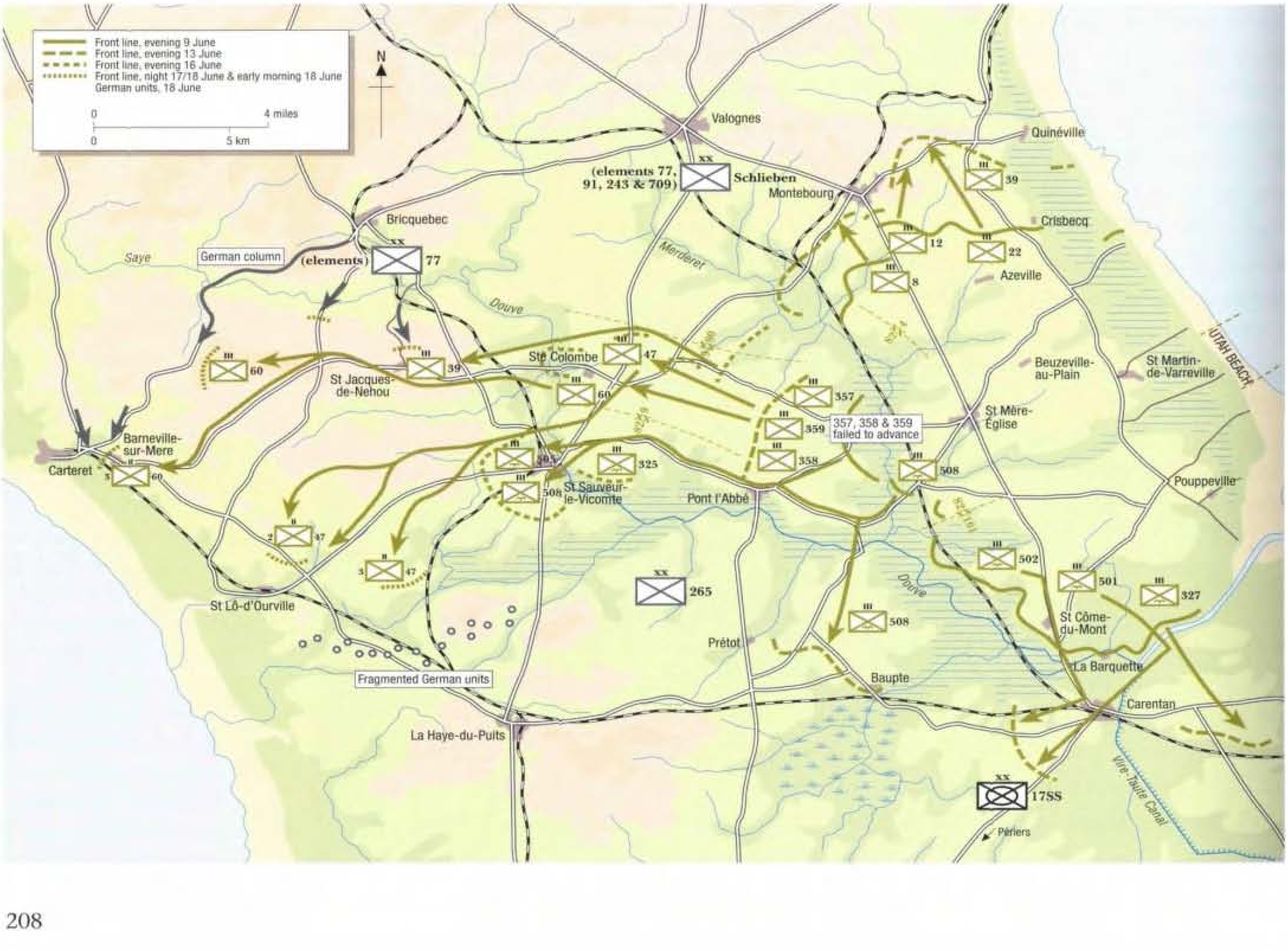
There had been growing indications from 'Enigma' decryption that Rommel planned to deploy the 17th SS-Panzergrenadier Division against Carentan, prompting Bradley to deploy a task force from the newly arrived 2nd Armored Division, including a company of medium tanks, a company of light tanks, and an armoured infantry battalion into the area. When the paratroopers reported the Panzer attack around 09.00hrs, the task force began moving and reached the town around 10.30hrs. The German attack petered out by noon. The inexperienced Panzergrenadiers had a hard time adjusting to the bocage fighting, and a combination of officer and NCO shortages as well as combat losses left many units leaderless. Some units began to retreat on their own, forcing von der Heydte and his adjutant to round up many of them, sometimes at gunpoint. The left flank of the German attack was supposed to be defended by the surviving Hotchkiss H-39 tanks of Panzer Abteilung 100, but the battered force evaporated. The US armoured counter-attack began around 14.00hrs down the Carentan–Baupte road. This threatened to cut off the German attack force, especially when it was followed by a second tank–paratrooper thrust down the Carentan–Periers road. Von der Heydte, finding the SS-Panzergrenadier Regiment 37 commander dazed, took command and ordered the Panzergrenadiers as well as his force to withdraw to a line he had reconnoitred earlier. Losses in the 17th SS-Panzergrenadier Division were 79 killed, 316 wounded and 61 missing. In addition, only about half of the division's 48 StuG IV assault guns were still operational with seven lost and 13 damaged.

Infuriated by the débâcle, Ostendorf attempted to make von der Heydte the scapegoat for his division's failure, and had him arrested and sent before an SS military judge that night. General Meindl, in temporary command of this sector after General Marcks had been killed in an air attack the day before, ordered von der Heydte released. The Seventh Army staff concluded that the counter-attack at Carentan had failed due to the 17th SS-Panzergrenadier Division's inexperience. The rebuff of the German counter-attack allowed Collin's VII Corps to consolidate the link-up with Gerow's V Corps on 14 June.

Cutting off the Cotentin

Although it had been Collins' intention to shift the emphasis of VII Corps to a rapid assault on Cherbourg, by D+3 the focus was changed again. The slow pace of the advance in the bocage convinced both Bradley and Collins that a quick capture of Cherbourg was unlikely. Under such circumstances, it became imperative to cut off the Cotentin peninsula from any further German reinforcements. The first issue was completing the link-up of the elements of the 82nd Airborne Division on either side of the Merderet River.

Cutting off the Cotentin, 10–18 June 1944.


Front line, evening 9 June
Front line, evening 13 June
Front line, evening 16 June
Front line, night 17/18 June & early morning 18 June
German units, 18 June
0
4 miles
0
5 km
N
Valognes
Quinéville
(elements 77, 91, 243 & 709)
Schlieben
Montebourg
39
Crisbecq
12
22
8
Azeville
Bricquebec
Saye
German column
(elements)
77
Merderet
Douve
UTAH BEACH
St Martin-de-Varreville
Beuzeville-au-Plain
60
39
St Jacques-de-Nehou
Ste Colombe
47
60
357
359
357, 358 & 359 failed to advance
358
St Mère-Église
Barneville-sur-Mere
Carteret
60
325
505
508
St Sauveur-le-Vicomte
Pont l'Abbé
508
Pouppeville
2
47
3
47
265
502
501
327
St Lô-d'Ourville
508
St Côme-du-Mont
Prétot
La Barquette
Baupte
Fragmented German units
Carentan
La Haye-du-Puits
17SS
Vire-Taute Canal
Périers

With the positions on the east bank of the Merderet at La Fière bridge secure, on D+1 Gavin sent the 3/508th PIR to Chef-du-Pont to link up with Colonel Shanley's isolated force on the west bank. The fire directed against the causeway during the daylight hours made it impossible to carry out this mission, though Shanley was able to send a patrol across the causeway at night.

On D+2, the focus again returned to La Fière bridge. On the night of 8 June, two paratroopers from Colonel Timmes' group found a partially submerged road across the inundated fields north of the bridge, and crossed to the east bank. A plan was developed for Colonel Millett's group to join Colonel Timmes' group, and then link up with a battalion from the east bank moving across the newly discovered crossing. Colonel Millett's column began moving before daylight on 9 June, but were discovered and raked by German machine-gun fire. Colonel Millett was captured and the column retreated. The 1/325th Glider Infantry was able to make it across the inundated river and join Timmes' group, but attempts to push southward to the La Fière bridge were repulsed by German troops in a stone building dubbed the 'Grey Castle'.

Under growing pressure from senior commanders, Gavin was forced to execute a direct assault across the La Fière causeway from the east bank. He moved a few M5A1 tanks and a company of the 507th PIR to the forward edge of the bridge to provide covering fire. The force chosen for the assault was the 3/325th Glider Infantry. After a preliminary artillery bombardment and under a partial cover of smoke, Company G led the attack off at 10.45hrs on 9 June. The glidermen were told to make the 500yd (457m) crossing in one sprint, but only a handful of men were able to do so in the face of intense German machine-gun fire. Those who hesitated were caught in the open on the exposed stretches of the causeway, and casualties soon mounted. One of the M5A1 light tanks attempted to push across the causeway, but hit a mine. This tank, along with a German Hotchkiss H-39 knocked out in earlier fighting, further congested the narrow passage. Company E tried the crossing next, but along the northern bank of the causeway instead of on top of it. They made their way toward the church in Cauquigny, and the German positions were suppressed by small-arms fire from Timmes' group. After this company had made its way over the bridge and began clearing buildings on the north side of the exit, it was followed by Company F, which pushed beyond the bridgehead toward Le Motey. Due to the usual radio problems, Gavin was unsure of the progress of the 3/325th Glider Infantry and ordered his reserve company from the 507th PIR across the causeway. Further advances westward towards Le Motey were brought to a halt when US artillery continued its fire missions into the area, unaware that US troops had pushed that far. In spite of the many problems, the attacks on 9 June finally cleared the La Fière bridge and causeway.

With passage of the Merderet River open, Collins moved the 90th Division forward to take over the task of moving westward. On 10 June two regiments of the 90th Division began a westward advance over the La Fière and Chef-du-Pont bridges aiming to establish a bridgehead over the Douve River. The 357th Infantry moved over the La Fière bridge but ran into the defences of GR 1057 past Le Motey. Inexperienced in bocage fighting, its lead battalion retreated into the positions of the 325th Glider Infantry. A second attack at dusk by another battalion was equally unsuccessful. The 358th Infantry was assigned to reach Pont l'Abbé, and its lead battalion dug into defence positions short of the objective after coming under heavy fire. GR 1057 launched a counter-attack in mid-afternoon, without success. The attacks continued the following day with 357th Infantry still unable to overcome the German defensive positions around Les Landes, and the 358th Infantry on the fringe of Pont l'Abbé. The following day, the 359th Infantry rejoined the division from other assignments and reinforced the attack. The 12 June attack was further reinforced by the 746th Tank Battalion and additional artillery fire support. In spite of the reinforcements, the advance on 12 and 13 June was measured in hundreds of yards. In frustration at the slow pace of the advance in four days of fighting, General Collins visited the division on 13 June. After visiting the divisional command post, Collins was aggravated when he could find no regimental or battalion headquarters, nor much evidence of fighting.

Exasperated by the 90th Division's poor performance, Collins telephoned Bradley about his plans to relieve the division's commander and two regimental commanders. He felt that the main problem was the division's poor training and lacklustre leadership. They decided to pull the division out of the line in favour of an experienced unit and Bradley agreed to the use of the 9th Division, regarded as being one of the two best divisions in theatre along with the 1st Division at Omaha Beach. This delayed the advance, so the attack resumed toward the Douve on 15 June with the 82nd Airborne Division on the left and the 9th Division on the right. The 82nd Airborne Division reached St Sauveur on the Douve on 16 June while the 9th Division's 60th Infantry reached the Douve near Ste Colombe. With German resistance crumbling, Collins urged Eddy to push to the sea as rapidly as possible. During the night of 16/17 June, a company from 3/60th Infantry riding on tanks and other armoured vehicles reached the hill overlooking the coastal town of Barneville-sur-Mer before dawn. Early in the morning, the company advanced into the town, unoccupied except for a few startled German MPs. The rapid advance by the 9th Division had severed the Cotentin peninsula and cut off Cherbourg.

The sudden isolation of Cherbourg caused a major row among senior German leaders. Rommel had moved the 77th Infantry Division into the Cotentin peninsula on 9 June, but was unwilling to lose the best division in 84th Corps. On 15 June he ordered the amalgamation of the remnants of the 709th Infantry Division and 243rd Infantry Division into Kampfgruppe 'Schlieben' with a mission to defend the port of Cherbourg. The 77th Infantry Division, along with the few surviving elements of the 91st Luftlande Division, were formed into Kampfgruppe 'Hellmich' and instructed to withdraw southward if the Americans cut off the peninsula with an aim to prevent any further American penetration south. The capture of St Sauveur prompted Rundstedt and Rommel to begin the withdrawal of Kampfgruppe 'Schlieben' into the Cherbourg area. Rommel and Rundstedt met with Hitler on 16 June at the W2 Battle HQ in Margival, France. Hitler insisted that the largest possible forces be committed to the defence of 'Fortress Cherbourg', but he finally agreed to allow Kampfgruppe 'Hellmich' to withdraw southward starting on 17 June. The order proved difficult to implement after both General Hellmich and the commander of the 77th Infantry Division, General Rudolf Stegmann, were killed during air attacks on 17 June. The first unit to begin the withdrawal was GR 1049, which ran into 1/39th Infantry on the morning of 18 June near St Jacques-de-Nehou and was stopped. The neighbouring GR 1050 had more success, gaining control of a bridge over the Ollande River near St Lô-d'Ourville from the hapless 357th Infantry of the 90th Division, capturing about 100 GIs and breaking out with about 1,300 men before the gap was finally sealed. In the event, this was the only major group to escape the encirclement, and the 77th Infantry Division lost most of its artillery in the breakout attempt.

North to Cherbourg

On 18 June 1944, Field Marshal Bernard Montgomery laid out the immediate tasks for the Allied forces in Normandy. The First US Army was to take Cherbourg while the British Second Army was to take Caen. The breakthrough to the west coast led Bradley to re-organize the forces on the Cotentin peninsula. The new VIII Corps under Major General Troy Middleton was given the 82nd Airborne and 90th Division with an assignment to defend toward the south and prevent any German forces from reinforcing the Cotentin peninsula. Collins' VII Corps now consisted of three infantry divisions, the 4th, 9th and 79th Divisions, which had the mission of advancing on Cherbourg. Eddy's 9th Division began an abrupt change in direction from west to north, moving against the western side of Cherbourg. Barton's 4th Division continued its push up along the eastern coast to Cherbourg, while the newly deployed 79th Division would push up the centre. The initial aim was to seize the Quineville ridge, which dominated the terrain southward.

The 4th Division had been fighting northward since D-Day, its advance hampered by the presence of many fortified coastal artillery batteries along the eastern coast. On the left flank, 82nd Airborne's 505th PIR and 4th Division's 8th Infantry Regiment finally reached positions from the Montebourg railroad station to the western outskirts of Montebourg by 11 June. Barton decided against taking the city for fear of tying down too many troops in street fighting. Instead, on 13 June, the 8th Infantry set up defensive positions around the city to contain any German forces within it.

A pair of M4 medium tanks advance along the battered Rue du Val-de-Saire in the Tourlaville district of Cherbourg on 26 June 1944. The 746th Tank Battalion supported the 9th Division during the fighting in Cherbourg.

The 22nd Infantry had a much more difficult time, confronting both the Crisbecq and Azeville coastal batteries, which had been reinforced by infantry from the 709th Infantry Division and Sturmabteilung AOK 7. After repeated attacks, the Azeville position was finally overwhelmed on the afternoon of 9 June by an attack on the command blockhouse with satchel charges and flame-throwers. Frustrated by the failure of previous attacks on Crisbecq, Gen Barton formed Task Force Barber from the 22nd Infantry, reinforced with M10 3in tank destroyers of the 899th Tank Destroyer Battalion, and tanks of the 746th Tank Battalion. He instructed Barber to skirt around Crisbecq and seize the high ground around Quineville after taking Ozeville. The attack was frustrated by the thick bocage, heavy German artillery fire and determined counter-attacks. The Crisbecq fortifications finally fell on 11 June when 57mm anti-tank guns of K/22nd Infantry fired through the embrasures of the two remaining strongpoints. To gain momentum, Collins took the newly arrived 39th Infantry from the 9th Division and sent it to deal with the many strongpoints along the coast. This freed up Task Force Barber to concentrate on positions further inland, and both air support and naval gunfire support resumed after several days of bad weather. Quineville was finally taken on 14 June, along with the ridgeline to the west, which had been the anchor of German defences in this sector. Besides clearing the gateway to Cherbourg on the east coast, the operations in the week after D-Day finally ended the threat of German artillery fire into Utah Beach, which had been hampering unloading operations there.

The drive on Cherbourg began on the evening of 19 June with the 4th Division kicking it off at 03.00hrs followed by the 9th and 79th Divisions at 05.00hrs. The 4th Cavalry Group was assigned to protect the right flank of the 4th Division and move up along the eastern coast. German defences by this stage of the campaign were the disorganized remnants of four divisions. The 9th Division was facing portions of GR 920 and GR 921 from the

Some of the most savage fighting for Cherbourg took place in and around Fort de Roule on a hill overlooking the port. Although the 314th Infantry seized control of the upper sections of the fort on 25 June, it took another day of fighting to secure the lower galleries. (Military History Institute)

243rd Infantry Division along with the surviving elements of the 77th Infantry Division that had failed to escape southward during the breakout attempt two days before. The 79th Division in the centre faced parts of the 77th Infantry Division as well as remnants of the 91st Luftlande Division. The 4th Division was facing most of the 709th Infantry Division, the survivors of Sturmabteilung AOK 7, and large parts of the 243rd Infantry Division.

The initial attacks made steady progress as the German units tended to withdraw after first contact. After the peninsula had been isolated on 17 July, the Cherbourg garrison had been cut off from most outside communication. On 19 July General von Schlieben decided to disengage his forces from the front, and pull them back into a fortified zone on the outskirts of Cherbourg in hopes of conducting a protracted defence. As a result, the American advance only encountered rearguard units or outposts that had lost contact with headquarters. On 20 June Eddy began steps to cut off the Cap de la Hague peninsula from the rest of the Cherbourg defence. German resistance stiffened considerably, and Eddy realized that the 9th Division had finally run into the main line of defence for Fortress Cherbourg.

Von Schlieben re-organized his disparate forces into four battlegroups (Kampfgruppe) that formed a semicircular defensive line outside the city. The German defences were based on a series of hills and ridges located 4 to 6 miles from the port. Many of the defences included bunkers, while others included concrete structures of the abandoned V-1 buzz bomb bases. The attack on Cherbourg was preceded by an intense air preparation conducted by the IX Tactical Air Command. The ground attack on the afternoon of 22 June was preceded at 12.40hrs by 25 minutes of rocket attacks and strafing by ten squadrons of Typhoons and Mustangs of the 2nd Tactical Air Force (RAF), 55 minutes of bombing and strafing by 562 P-47s and P-51s, followed at H-Hour (14.00) by bombing runs of 11 groups of B-26 Marauders of the Ninth Air Force. The air attacks proved less effective than anticipated, and many infantry units radioed that they were being inadvertently attacked. The best results had been obtained on the western side where the 9th Division artillery had suppressed German flak positions in anticipation of the air missions. None of the main defences were cracked on 22 June, and it took two days of hard fighting before the first portions of the defensive belt were finally overcome. The first penetrations past the outer defences took place in the 9th Division's sector near the Flottemanville–Hague strongpoints late in the evening of 23 June.

Although von Schlieben was in command of the four divisions holding the city, the actual command of the port was under Generalmajor Robert Sattler until 23 June when Hitler appointed von Schlieben as the commander of Fortress Cherbourg. Requests for further ammunition and reinforcements went unanswered, but senior German commanders felt that the garrison could hold out for months due to the geography and the extensive fortifications around the port.

The final assaults into the town were made by infantry–tank teams, with each of the divisions receiving a separate tank battalion for support. These were essential to deal with the many bunkers and defences encountered. Although German resistance on 24 June continued to be intense, there was a growing tendency for the defences to crumble once vigorously assaulted. By the end of the day, breaches had been made in the final layer of outer defences, allowing the first access to the city itself. At dawn on 25 June, a German medical officer accompanied by a captured American pilot came out under a flag of truce to ask that the naval hospital be spared from shelling and for a supply of plasma. They were allowed to return to the city with the plasma, and with a demand for the immediate surrender of the city. By the time the demand had reached von Schlieben, the 314th Infantry was already assaulting Fort de Roule overlooking the city. The intensity of the fighting for the fort is evident from the fact that two Medals of Honor for bravery were awarded for the action. By midnight, the 314th Infantry had broken into the fort and occupied the upper levels, but with German troops still occupying the lower galleries. The 47th Infantry made the first penetration into the suburbs of Cherbourg on 25 June after overcoming the defences at Equeurdreville. By nightfall the city was illuminated by the fires of the burning port facilities that the Germans had set as the final stage of the destruction of the port.

The final assault into the city by the 9th and 79th Divisions occurred on 26 June. US patrols in the city continued to be harassed by artillery fire from the lower levels of Fort de Roule, which were still in German hands. These lower levels were not immediately accessible to the troops from 2/314th Infantry on top of the fort, and they began to try to lower charges down ventilation shafts. A demolition team snaked its way along the cliff face on the western side of the fort and blasted one of the tunnel openings with pole charges and bazookas. Troops below the fort began firing into the embrasures with 57mm anti-tank guns. Resistance finally collapsed in the early evening and several hundred prisoners were taken.

Fighting in the city remained intense through the day, and the presence of many large concrete structures and coastal gun positions greatly complicated the American attacks. The 39th Infantry learned from prisoners that General von Schlieben was in a bunker in St Sauveur, and by mid-afternoon Companies E and F had fought their way to the tunnel entrance of the command bunker. A prisoner was sent in to demand surrender, which was refused. M10 tank destroyers were brought forward, and a few 3in high explosive rounds were enough to cause the Germans to reconsider. About 800 officers and troops began to pour out, including General von Schlieben, Admiral Walter Hennecke and their staffs. The

A group of GIs and French civilians celebrate the capture of Cherbourg, driving around the city in a captured Renault UE tractor.

surrender was made to General Eddy, but von Schlieben refused to order the surrender of the rest of his garrison. Nevertheless, the forces still holding the City Hall surrendered after learning of von Schlieben's surrender. The last major defensive position in the city was the Arsenal, which was protected by a moat and strongly defended by anti-aircraft and anti-tank guns on parapets. The 47th Infantry was assigned to take it on the morning of 26 June, and began by picking off two of the 20mm flak parapets with tank fire. Before the main assault at 08.30hrs, a psychological warfare unit brought up a loudspeaker, urging the garrison to surrender. General Sattler, the deputy commander of Cherbourg, agreed to surrender the 400 men under his command, and the rest of the Arsenal surrendered by 10.00hrs. This ended the organized resistance in the port, though mopping-up operations continued for two days. About 10,000 prisoners were captured on 25–26 June. Two more days were spent eliminating outlying forts in the harbour, mainly by air attack and tank gun fire. There were also isolated garrisons on Cap Levy that were taken by the 22nd Infantry, and about 3,000 Germans had retreated to Cap de la Hague. The 9th Division assaulted these positions and overran the final defences on 30 June. A total of 6,000 prisoners were captured in the final operations in late June. On 1 July, the 9th Division reported to Collins that all organized resistance on the Cotentin peninsula had ended.

The total casualties of the VII Corps from D-Day to the fall of Cherbourg at the end of June was about 22,000. The large number of missing was due to scattered airborne landings that accounted for 4,500 of the missing, some of whom were captured. German casualties are not known with any precision although prisoners totaled 39,000. The Allies had hoped to capture Cherbourg by D+15, so its capture on D+21 was not far behind schedule, especially compared to the plans for Caen in the neighbouring British sector. The capture of Cherbourg did not provide any immediate benefit to the Allied supply situation, as the Germans had thoroughly demolished the port facilities prior to the surrender. Their one failure in this regard was the large fuel storage facility in the port, which remained intact and quite valuable to the Allies. It took almost two months to clean up the port, but it was back in operation by September 1944.

US VII CORPS CASUALTIES D-DAY TO 1 JULY 1944

Unit	Killed	Wounded	Missing	Captured	Total
4th Div.	844	3,814	788	6	5,452
9th Div.	301	2,061	76		2,438
79th Div.	240	1,896	240		2,376
90th Div.	386	1,979	34		2,399
82nd Abn. Div.	457	1,440	2,571	12+	4,480
101st Abn. Div.	546	2,217	1,907	?	4,670
Corps troops	37	157	49	61	304
Total	**2,811**	**13,564**	**5,665**	**79**	**22,119**

The fall of the port shocked Hitler and the senior German leadership who believed that such a heavily fortified facility could hold out for months. They seriously overestimated the paper strength of their own forces and seriously underestimated the combat efficiency of the US Army. With the capture of the Cotentin peninsula, hope evaporated that the Allies could be dislodged from France.

PART III

BRITISH AIRBORNE FORCES

British paratroops of 1st Parachute Brigade boarding a C-47 Dakota of USAAF IX Troop Carrier Command on the morning of Sunday 17 September 1944. (IWM – K7588)

BRITISH PARATROOPERS

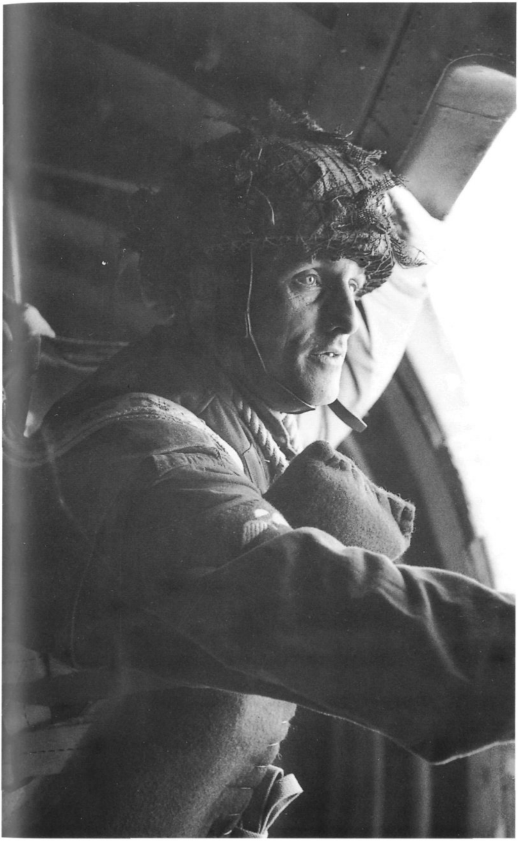
Tim Moreman

Recruitment and training of British paratroopers

The recruitment of British paratroopers, from the time when Prime Minister Winston Churchill issued orders in June 1940 for the formation of 5,000 parachute troops, differed greatly from that of the rest of the British Army. Those initially selected for parachute training came from No. 2 Commando, formed in July 1940 as part of this new elite raiding force, whose men were volunteers selected from the regiments, corps and services from across the UK. Volunteers were needed for 'special service' since this was regarded as particularly dangerous duty requiring men of exceptional ability. In November it was quickly re-designated the 11th Special Air Service Battalion, divided into separate parachute and glider wings. In September it was re-designated yet again as the 1st Parachute Battalion and formed part of a newly raised 1st Parachute Brigade.

The rapid expansion of the airborne forces carried out in the UK in 1940–41, following the 'success' of the raid on the Tragiano aqueduct in Italy, meant the demand for volunteers greatly increased. A 2nd and 3rd Parachute Battalion were quickly raised from scratch, as part of 1st Parachute Brigade, again drawing volunteers from across the British Army. A 4th Battalion was raised during 1942, adding to the number of men required for this new, dangerous and initially rather unknown service. A 2nd Parachute Brigade was activated in July 1942, with the 4th Battalion and new 5th and 6th Battalions converted from existing infantry battalions. These parachute battalions were made part of a new Parachute Regiment; this regiment and a new Glider Pilots Regiment were consolidated into the new Army Air Corps on 1 August 1942. Further parachute brigades were formed later during the war, and on 1 October 1942 the 1st Airborne Division, commanded by Major General F. M. Browning, was raised, with both parachute and air-landing troops under his command.

The War Office initially found these men by distributing army circulars to units calling for volunteers. To secure sufficient volunteers, recruiting teams visited units throughout the UK which, despite understandable resistance from some COs eager to retain their best



A paratrooper stands at the door of a Dakota, waiting for the signal to jump, during a large-scale airborne forces exercise, 22 April 1944. (IWM – H37720)

British paras preparing to undertake a training jump. The British did not use a reserve parachute, reckoning that its £60 cost would be wasted; the small pack being rigged to the harness is the gas respirator satchel. Note the early British jump smock, a direct copy of the first German 'step-in' design; the paratroopers of both nations called them 'bone-sacks'.

officers, NCOs and men, were well received. As one former gunner wrote, 'They talked about us joining their "band of brothers". No one ever referred to you as a brother in the RA. Which no doubt is a great regiment, but it was not for us.'[1] In part to allay fears that the airborne forces were creaming off the best manpower, the War Office initially limited the number of volunteers from each unit to ten men. Men with drive, enthusiasm and imagination flocked to join.

The motivations of the first British paratroopers for joining this new and exciting arm were mixed. Many were adventurers in search of excitement, a challenge and something more rewarding than normal military duties, which at this time comprised mostly hum-drum home defence duties, administrative tasks and preparations for the long-awaited 'Second Front' in North-West Europe. To such men the Parachute Regiment offered an exciting diversion, with a greater opportunity of making an appreciable contribution to the British war effort and a chance to see combat action. A former Royal Army Service Corps driving instructor who had joined No. 2 Commando observed, 'We were a motley crowd, English, Welsh, Irish, and Scots, and belonged to all classes of life, ages running from 18 to 40 years. But we had one burning desire, and that was to have a go at Jerry ... One thing that was required to become a parachutist in those days was guts.'[2] As the professional reputation of the parachute battalions as aggressive, tough and elite troops grew so did the number of volunteers. The glamour of parachuting caused many to join, as British propaganda seized upon the early raids as an example of how these elite units struck back against the might of Nazi Germany. Extra pay – two shillings per man and four shilling per officer per day – awarded from the time men started parachute training and continuing as long as men remained doubtless added a further incentive for the more mercenary. Some entered without really knowing what was in store for them. In the words of an early volunteer, 'I had not very much idea of what special air service was, but presumed it would be something in the Commando line and just what the doctor ordered.'[3] A downside of relying on volunteers was that in time-honoured fashion many COs saw it as an opportunity to shunt off their shirkers, malcontents or physically unfit by 'volunteering' them for special duty. As Major General John Frost, then serving in 2 Para, later wrote:

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[1] *James Sims,* Arnhem Spearhead *(London: Imperial War Museum, 1978), p. 1.*

[2] *Julian Thompson,* Ready for Anything: The Parachute Regiment at War 1940–1982 *(London: Weidenfeld and Nicholson, 1989), pp. 3–4.*

> I was amazed to see with what gusto some of them had played the game. They had been instructed to send only volunteers of A1 physical fitness and good character ... Among those who came nearly half had no documents, a large number could be labelled lame, halt or blind, a good few were hardened criminals in the military and sometimes civil sense, and some had been arbitrarily detailed as if for some unpleasant fatigue party.[4]

Much time had to be spent by para officers sorting the sheep from the goats. Indeed, in 1941–42 nearly half of those who presented themselves for the Parachute Regiment were judged unsuitable. Those attracted by the glamour of the unit quickly fell by the wayside or gave up after the hardship and danger involved in the airborne forces' rigorous training regimen became apparent.

The decision to dramatically expand the number of parachute units in 1942 could only be achieved by converting normal line infantry battalions – already highly disciplined and possessing regimental spirit and esprit de corps – to an airborne role, a process involving re-organizing, re-equipping and re-training. When converted to this new role officers and men were asked whether they wished to volunteer for parachute training. In the case of the 12th and 13th Battalions, elements of 6th Airborne Division, about 50 per cent chose to do so and later qualified as parachutists. Many were transferred out for medical and other reasons. Volunteers for the airborne forces from other units made up the remaining men.

The first trainees for 2nd and 3rd Parachute Battalions arrived at Hardwick Hall and underwent training and then qualifying parachute descents a company at a time. Later volunteers underwent a more formal system of selection as the size of the Parachute Regiment increased. Those men who volunteered as paratroopers underwent vigorous selection and instruction at the Airborne Forces Depot at Hardwick Hall (formed unofficially in April 1942 and later renamed the Airborne Forces Depot and Development Centre), near Chesterfield in Derbyshire. As historian Peter Harclerode has written:

> Hardwick Hall was a somewhat unprepossessing place, consisting of red brick huts surrounded by barbed wire fences, and those who underwent the selection course in those days remember it too well. The majority of those in airborne forces passed through it only one or twice, being happy not to return because life there could be somewhat bleak.[5]

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[3] *Major General John Frost,* A Drop Too Many *(London: Cassell, 1980), p. 17.*

[4] *Ibid, p. 25.*

[5] *Peter Harclerode,* Para! Fifty Years of the Parachute Regiment *(London: Arms and Armour, 1992), p. 26.*

Before being accepted all officers and men underwent a strict medical, which weeded out those who had previously broken a leg, had false teeth or wore spectacles. A test to determine whether men were susceptible to air sickness was carried out by placing candidates on a stretcher suspended from the roof and vigorously swinging it through the air for 20 minutes. Army Physical Training instructors put all candidates through a gruelling course lasting a fortnight. This tough introduction to the Paratroop Regiment was intended to eliminate those men who could not meet the exacting standards of endurance and physical fitness demanded by the Parachute Regiment. Men underwent intensive physical gym tests, assault courses and repeated road and cross-country marches throughout the surrounding area, carrying full arms and equipment, with all other work at the Depot done 'at the double'. This tough course ended with seven difficult tests, including running 2 miles in 16 minutes in full battle order. Only those judged as having sufficient stamina, self-discipline and physical and mental resilience passed the selection, with many potential recruits – normally the majority – Returned to Unit (RTU'd).

Parachute training: Ringway

Those who passed this vigorous selection procedure at Hardwick Hall underwent a fortnight's parachute training at the Central Landing School, located nearby at the former civil Ringway Airport near Manchester, to qualify as paratroopers. Under the command of Squadron Leader Louis Strange, with Major John Rock advising on the 'military organization of Airborne Forces', this training establishment was a new departure for the British services. A mixture of RAF instructors and members of the Army Physical Training Corps set about devising a suitable course, although their work was hampered by lack of suitable equipment and the availability of only six Armstrong Whitworth Whitley bombers for jump training. Despite these shortcomings, it was quickly pressed into service with the first students of No. 2 Commando arriving on 9 July 1940 for training. The first jump was made four days later. Army and RAF instructors had to learn the basics of parachuting, as well as develop suitable parachutes, equipment and methods of jumping from aircraft. As historian Julian Thompson has written, 'Despite the total lack of practical knowledge of parachuting techniques, text books, special equipment, and in some cases, the basic inability to impart knowledge to others, the RAF and Army instructors of all ranks shared a boundless enthusiasm and great courage.'[6] This new airborne training establishment underwent many changes of both name and command during the early war years. In September 1940 the school was expanded to become the Central Landing Establishment, with a Parachute Training School, Technical Unit and Glider Training Squadron. A year later it was re-named the Airborne Forces Establishment, with Squadron Leader John Callastius overseeing the development of the syllabus and ground training methods. The Parachute Training School was taken under the command of Wing Commander Maurice Newnham in July 1941, who commanded the establishment for the rest of the war. He oversaw various changes that considerably helped reduce wastage in two months by making training far less frightening. He aimed to instil the right attitude of mind in recruits to the perils and pitfalls of parachuting and worked out a standardized drill that average soldiers could understand and carry out.

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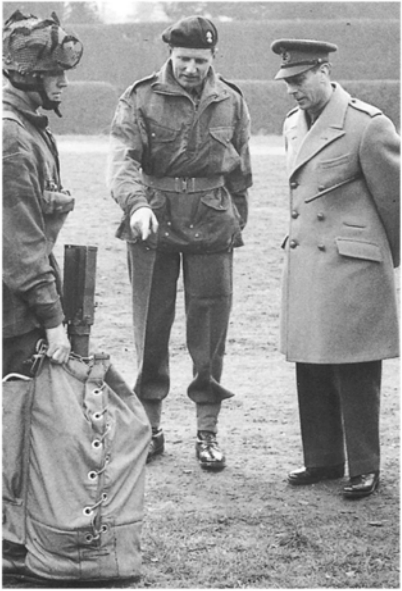
[6] *Thompson, op cit, pp. 2–3.*

The parachute phase of training began with a week of 'synthetic' ground training instructed by the RAF NCOs and some army, during which trainees learned how to exit from different types of aircraft, control parachutes in the air during descents, and land. Mock-ups of Armstrong Whitworth Whitleys, Short Stirlings, Handley Page Halifaxes, Armstrong Whitworth Albemarles and latterly US DC-3 Dakotas fuselages were constructed in hangars from which recruits made dummy jumps. Other types of training apparatus helped men learn flight drills, landing positions and correct methods of landing. Trapezes from which recruits were suspended helped teach in-flight drills, while wooden chutes down which men plummeted and then dropped from some height were used to teach rolling and falling – an important skill to prevent injury on landing. A device known as the 'fan' was used to simulate the impact of landing after a recruit jumped from a 20ft (6m) high platform. To finish the first week recruits made two descents from a tethered static barrage balloon at a height of 700 feet (213m), which provided their first terrifying experience of parachuting to the ground. It was not a popular stage of training, with many extremely nervous men suffering bouts of acute nausea while ascending in the balloon as it was buffeted to and fro by the wind. In the words of Major John Frost:

> Then came the morning when we found ourselves sitting side by side in the crazily swinging basket of a balloon which was slowly rising to a height of 600ft above Tatton Park and we smiled at each other with the learner parachutist's smile – which has no humour in it. One merely uncovers one's teeth for a second or two then hides them again quickly lest they should start chattering.
>
> We fiddled anxiously, threw a quick agonized glance at the ground below, but in the main we stared upwards, praying ... The first sensation of falling drew breath from my lungs, then a cracking sound from above and a sudden pull on my harness told me that my parachute was open, and the rest was heavenly.[7]

Men fell a distance of 120ft (37m) from a hole in the middle of a basket suspended beneath the balloon before a static line made the parachute snap open. Following this an instructor with a megaphone bellowed instructions on how to control a descent and land. Men who refused to jump were RTU'd.



British paratroop kit being explained to King George VI at an inspection in May 1944. On display is the British version of the 'leg bag' carrying the soldier's equipment. This was released during descent to dangle beneath the paratrooper on a restraining rope to minimize the danger of injury on landing. This bag holds a PIAT (Projector Infantry Anti-Tank). (IWM – H36712)

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[7] *Frost, op cit, p. 30.*

Chatting to visiting senior army and RAF officers before a jump, Lieutenant Colonel Eric 'Dracula' Down, CO of the British Army's 1st Parachute Battalion – renamed from 11th SAS Battalion in September 1941 – wears the rubber-padded training helmet; this was not used on operations. (Private collection)

During the second week at Ringway Airport, the trainees progressed to making a series of parachute descents from aircraft. This included five descents from aircraft onto a drop zone at Tatton Park, a nearby landed estate owned by Lord Egerton. Many found jumping from an aircraft a much less scary experience than jumping from a static balloon. As Thompson notes, 'The noise, sense of detachment from the ground and other distractions in an aircraft were far less disconcerting than the silent, lurching balloon cage on the end of a wire.'[8] Great care still had to be exercised, however. Trainees jumped from converted bombers, through holes cut in the floor of the aircraft, which increased the risk of injury while exiting and of rigging lines being twisted together as a result of the slipstream. Trainees learned to exit from aircraft in 'slow pairs', 'quick pairs', sticks of five men and finally sticks of ten men. A failure to complete these jumps resulted in an immediate RTU. Following the successful completion of the second week of the course, recruits were presented with their coveted parachute wings and red berets, and they joined their new units. As one recalled, 'We removed our motley collection of headgear and donned our red berets for the first time. It was one of the greatest moments of our lives and one of the proudest.'[9]

Such training was not without its costs. From the outset, casualties were not uncommon. On 25 July 1940 Private Evans, a former driver in the RASC who had volunteered for special service, plummeted to his death when the rigging lines of his parachute twisted round his canopy; this was the 136th jump from a Whitley since the school opened. By the end of 1940, at least three men had died during the first 2,000 descents carried out at Ringway. In November 1941 the men of the new 2nd and 3rd Battalions, the Parachute Regiment arrived for training and by the end of the 12-day-long course they had completed 1,773 descents. There had been only two refusals, 12 injuries and one fatality. Within two months, 1,000 men had completed basic parachute training.

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[8] *Thompson, op cit, p. 28.*

[9] *Sims, op cit, p. 16.*

Ground training

The newly qualified paratroops immediately joined parachute battalions, where they began a near-continuous process of training for their role as airborne light infantry. The fact that volunteers for the Parachute Regiment were already qualified soldiers when they joined simplified the task facing officers and NCOs somewhat, although men from other arms of service required intensive infantry training.

The training carried out at unit level in the Parachute Regiment was always tough, intensive and highly demanding, given that airborne soldiers would normally fight against superior odds and an enemy equipped with heavy weapons, artillery and tanks – all of which they lacked. Individual training aimed at inculcating attitudes and skills needed by a light infantryman. This included the development of courage, aggressiveness, self-discipline, self-reliance and, in turn, a high level of esprit de corps within each unit. Given the dearth of supporting arms and firepower in airborne forces, particular attention was paid to developing and maintaining a high standard of individual military skills – marksmanship, skill-at-arms and fieldcraft – and then building up through section, platoon, company and battalion training. A high standard of physical fitness was always deemed essential. Once deployed, paratroopers would march everywhere on foot laden with arms, ammunition, equipment and supplies. Recruits spent much time on near-endless route marches and repeated assault courses, carrying full arms and equipment, to build high levels of stamina and physical fitness. This was particularly important for specialists, who had to carry not only their personal small arms, but also heavy weapons and equipment broken down into individual loads for long distances.

Training within units was progressive from section, platoon and company level, with much tailored to the particular task allocated to paratroops: making a surprise descent, seizing an objective and holding it until relieved. Minor tactics were taught using a series of battle drills covering the attack, the defence and encounter battles. Large-scale exercises were regularly carried out lasting extended periods of time. Frequent exercises were held that normally began with a descent by parachute followed by intensive tactical training, often with live ammunition, with a particular task in mind. These included the capture of airborne bridgeheads, road and railway bridges and coastal fortifications. Invariably they ended with a long march back to base at a considerable pace. Indeed, the ability to cover long distances at high speed became a particular matter of pride in the Parachute Regiment. All platoons were required to cover 50 miles (80km) in 24 hours and all battalions to march 32 miles (51km) or more per day over several days in succession. Such training continued during brief spells between major fighting, with new lessons eagerly studied and new fighting methods practised under combat conditions. An unfortunate but inevitable side effect of repeated parachute drops and realistic instruction often using live ammunition was a steady trickle of dead, wounded and injured.

The COs and officers of parachute battalions were assisted by a Battle School set up at Hardwick Hall (a separate organization from the depot). This taught officers, NCOs and men the latest training techniques developed during the course of the war, as well as a new system of battle drills used for tactical training by the wartime army. Other tactical training, with or without live ammunition, was carried out over different types of terrain in the Derwent valley and on nearby moors owned by the Duke of Devonshire. Instruction included the destruction of enemy tanks and the demolition of bridges, roads and fortifications. An initiative test formed part of the syllabus, with trainees being dropped individually in Mansfield and Nottingham and having to make their own way back to base, despite the best efforts of the local police and other troops to capture them.

Belief and belonging

The Parachute Regiment always took great pains to ensure that a fierce sense of regimental pride was instilled amongst its new recruits and maintained by its officers, NCOs and men since it represented such an important means of improving combat effectiveness. A shared experience amongst officers, NCOs and Other Ranks of being selected for an elite force, passing parachute training and being awarded the coveted red beret and airborne cap badge was a powerful starting point. Skilful propaganda, lectures and slide-shows highlighting the righteousness of the British war effort, the successes of the Parachute Regiment on the battlefield and the uniqueness of regimental identity as an elite unit proved highly effective in creating an 'airborne spirit' – an acute sense of belonging and a willingness to take great risks above and beyond that often displayed by the ordinary British soldier. It worked. As a member of the 2nd Battalion, the Parachute Regiment (2 Para) recalled, 'Our ideals could be summed up as a willingness to fight anyone at any time, a determination not to let down our officers and comrades, and a resolve to uphold the formidable reputation of the Parachute Regiment.'[10]

The newly formed Parachute Regiment obviously lacked the long and glorious traditions of British Army line regiments that did so much to build combat effectiveness in the latter. A major effort was immediately made to create its own traditions, however, as a means of building morale and belief in the ability of airborne troops. The careful study of operations such as the Bruneval raid – the Parachute Regiment's first Battle Honour – formed part of this process of building a distinctive identity, with considerable attention paid to how high standards of aggressiveness, skill-at-arms and light infantry training paid dividends on the battlefield.

The German Wehrmacht also played an indirect part in building a distinctive identity and cohesion in the ranks by bestowing upon British paratroops who had fought in North Africa a nickname – '*Rote Teufel*' or 'Red Devils' – that quickly captured the imagination of airborne troops and stuck. Indeed, it was played upon by officers in the Parachute Regiment as proof of its high combat effectiveness and its considerable achievements and to spread 'airborne spirit' to both new recruits and the general public. Part of the process was the adoption of distinctive battle cries, including the cry 'Waho Mohammed', which had been made their own by 1st Parachute Brigade during the Tunisian campaign.

The highly distinctive specialist headgear, uniform and other items of airborne forces insignia played an important part in fostering belief, regimental identity and a sense of belonging to an elite without equal in the British armed forces. The maroon beret was adopted as the most obvious and distinctive headgear of the airborne forces as a whole at Major General F. A. M. Browning's direction following the formation of the Parachute Regiment in August 1942, as part of the Army Air Corps. Although initially unpopular

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[10] Sims, op cit, p. 23.

British paras apply face camouflage before donning their parachutes for the Normandy jump. The 'red beret' (actually maroon) of British airborne forces would eventually become a near-worldwide distinguishing headgear for parachute troops.

amongst some men still proudly wearing the headgear of their parent unit, this practical item of headgear soon gained acceptance and popularity. Indeed, it quickly became *the* symbol of this elite force. The Parachute Regiment had its own distinctive cap badge, in place of the Army Air Corps badge that was initially used. The badge was worn on the red beret, and together these quickly became a symbol of the new unit. The beret and cap badge were supplemented by other types of insignia worn on battledress that distinguished paratroops from other troops. A set of wings worn on the right shoulder denoted passing of the parachute course. An airborne patch – depicting the hero of Greek mythology Bellerophon astride the winged horse Pegasus – was designed by Edward Seago, who served as Camouflage Officer in Southern Command, to be worn on the shoulder. Like the airborne arm-of-service flash, worn above the patch on each sleeve of the battledress blouse, it was also Cambridge blue and claret in colour.

The individual parachute battalions also endeavoured to reinforce their own corporate identity within the Parachute Regiment. The expansion of the airborne troops in September 1941 led to the introduction of coloured lanyards denoting each battalion: dark green for the 1st Battalion, gold for the 2nd Battalion and red for the 3rd Battalion. 1st Parachute Brigade HQ also wore a blue lanyard. As James Sims, serving in the 2nd Battalion, the Parachute Regiment described, 'Everyone in our battalion had a "larny" lanyard, as it was known, and it was very highly regarded. Wearing this spectacular gold lanyard, whitening the parachute badge on your right shoulder and toughing up the mortar badge with red ink was not bull but personal pride.'[11]

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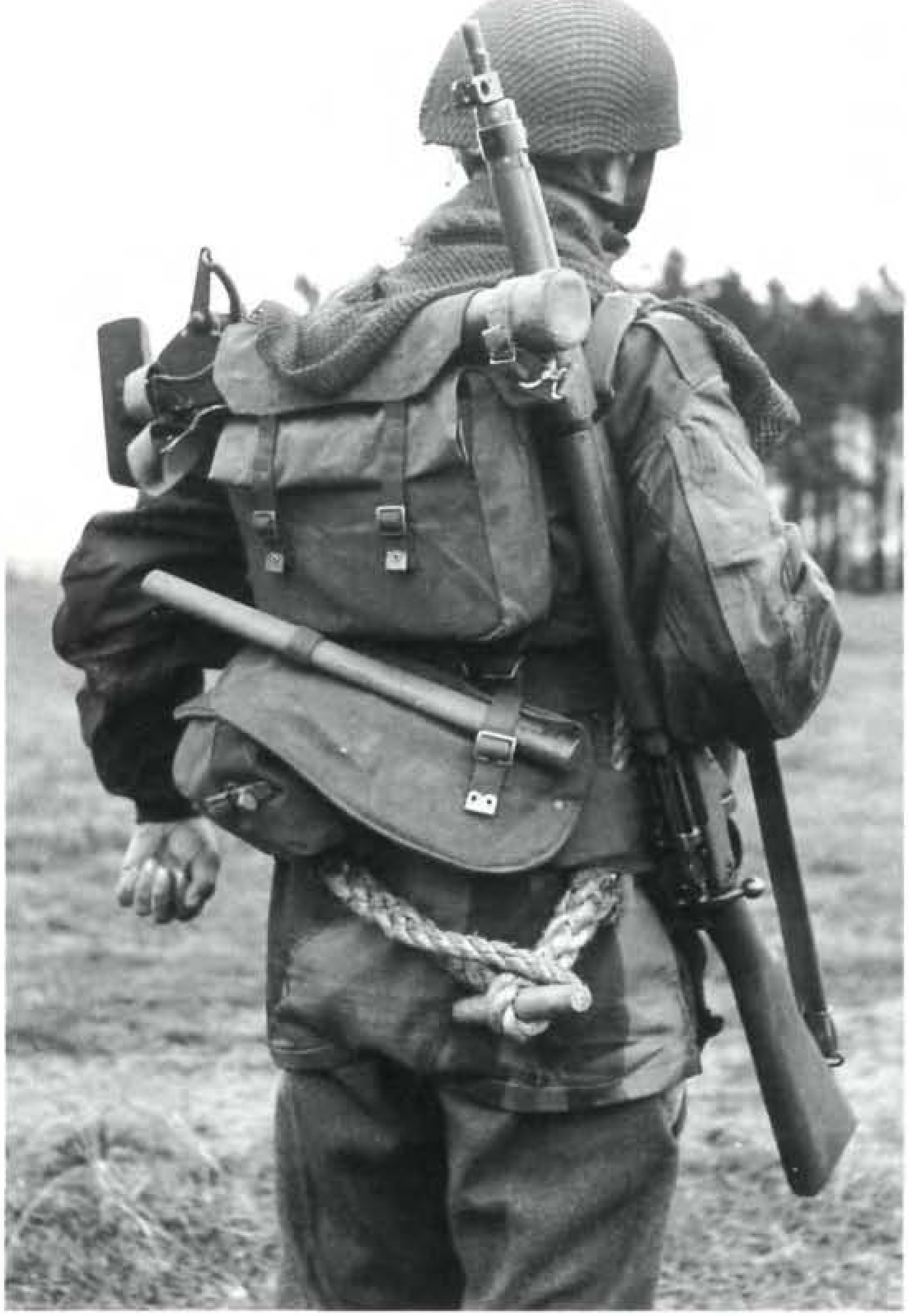
[11] *Ibid, p. 21.*

Appearance, arms and equipment

The uniform, arms and equipment of British paratroopers underwent considerable development as World War II progressed, eventually resulting in the highly practical outfit suitable for making parachute descents and combat as worn at Arnhem in September 1944.

The British paratrooper who fought during World War II carried an extremely light scale of weapons and equipment as befitted his essentially fast-moving and hard-hitting role as light or assault infantry. Paratroopers largely employed the same arms and equipment as the ordinary line infantryman, but with important and distinctive additions suited to their specialized combat role.

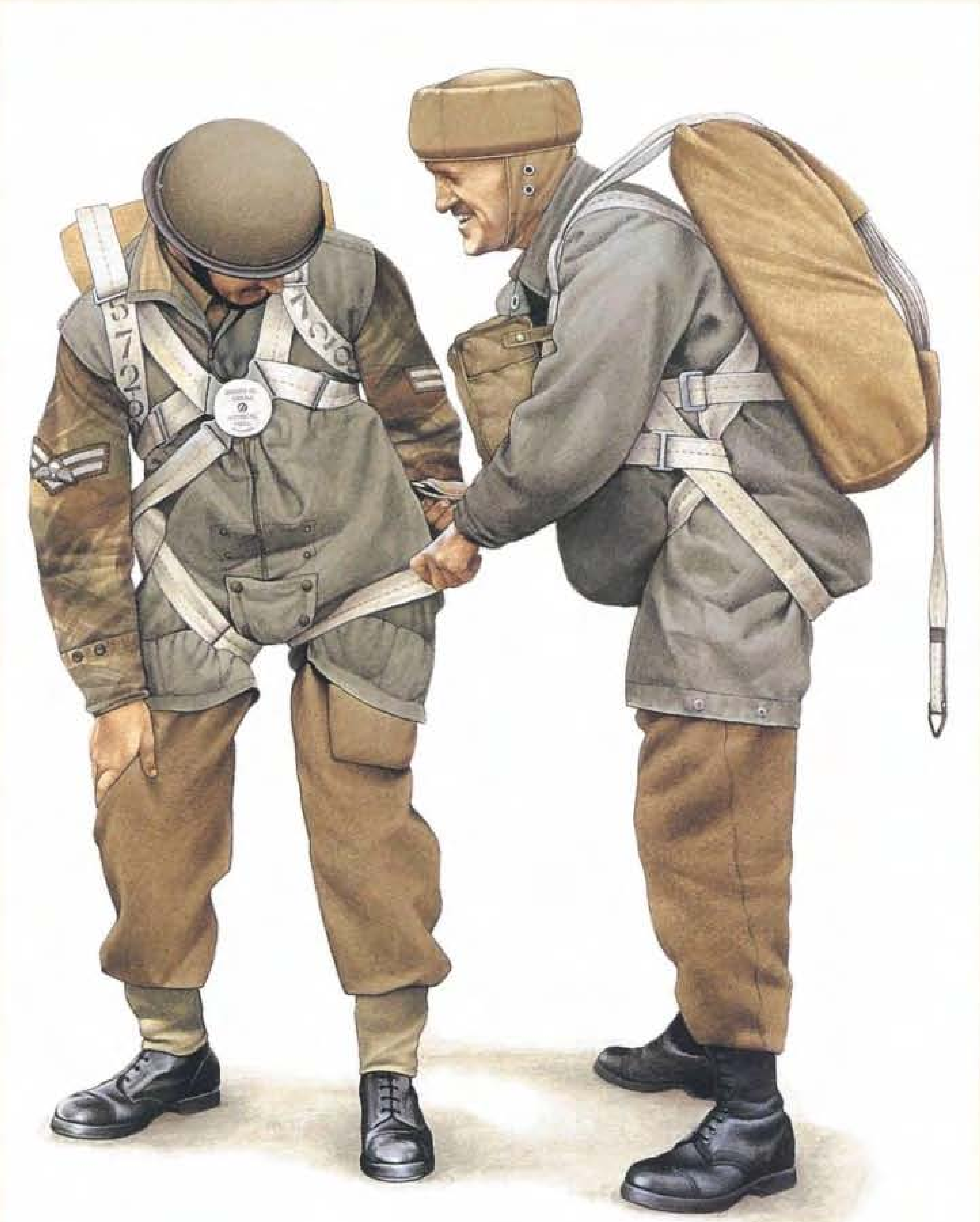
The standard sidearm carried by officers in the Parachute Regiment and the crew of heavy weapons was the .38 Enfield or Webley revolver and also some US Colt .45cal automatic pistols. The latter had a seven-round magazine and was extremely popular given its considerable stopping power at short range. The tried and trusted Mk IV .303 Lee-Enfield rifle formed standard issue for most British paratroops throughout World War II. With an effective range of up to 3,000yd (2,700m), this highly accurate, rugged and extremely reliable weapon was probably the finest manually operated bolt-action rifle in the world. With a muzzle velocity of 2440fps, its .303 round had great stopping power. Although only having a ten-round magazine, filled using chargers of five rounds, in skilled hands a high rate of fire was possible of up to 15 rounds a minute. Its 'pig sticker' spike bayonet, however, proved less than popular since it did not inflict much damage and was far less useful than the older sword bayonet for opening tins and other miscellaneous tasks.



This British para has the cut-down Mk VIII version of the 2in mortar stowed under the flap of his small pack. (IWM)

The battalions of the Parachute Regiment were issued with a higher than average number of sub-machine-guns. During the latter years of World War II different marks of the 9mm Sten sub-machine-gun were employed by the airborne forces, whose design had been influenced by their specific requirements. This simple, mass-produced weapon worked on the open bolt blow-back system and could be fired semi-automatic or full automatic. The Mk V widely used at Arnhem had a wooden pistol-grip forestock and a wooden stock. Firing a 9mm bullet, it had a 32-round magazine fitted to the side of the weapon. It could also be fitted with a 'pig sticker' bayonet like that used on the .303 Lee-Enfield rifle for close-quarter combat. Although early models had a deservedly poor reputation for safety and reliability in the field, those produced later during the war performed well despite being prone to jamming and awkward to load.

The main source of firepower within infantry platoons, however, came from the superb .303 Bren light machine-gun. This highly accurate, extremely reliable and robust gas-operated weapon was among the best in its class, capable of firing single rounds or long bursts. Based on a Czech design developed at Brno and later manufactured at Enfield (hence the name), this highly popular automatic weapon weighed 23lb (10.4kg) and was fitted with a bipod for greater accuracy at ranges up to 600yd (550m). With a distinctive curved magazine containing 30 rounds this automatic weapon had a crew of two – one to fire the weapon and a second to carry magazines filled with ammunition, tools and spares. As a magazine-fed weapon, it was unlike German counterparts; however, it could not develop the



PARA JUMP UNIFORMS

Emplaning at Ringway, the para on the left, a corporal from the Parachute Regiment (1943), wears an X-Type 'chute over the 1943 sleeveless green cotton smock; this had a frontal zip, and press-studs to fasten it between the legs. It is worn over '37 webbing and the Denison camouflage smock. The 1941 steel helmet has a hard rubber rim (later deleted). The 1941 airborne pattern battledress trousers have a bellows pocket replacing the patch map pocket on the left thigh. The para on the right is modelled after Lieutenant Colonel E. E. Down of the 1st Parachute Battalion, 1940–41. The 1940 long-sleeved jump smock was patterned on the German version. The helmet is the canvas and sorbo-rubber 'bungee'. Note the nylon webbing static line with its forged D-ring, neatly stowed in pockets on the back of the X-type 'chute pack. The gas-mask container is clipped to the parachute harness on his chest. (Kevin Lyles © Osprey Publishing Ltd) same volume of firepower, and frequent halts were required to change magazines, which in themselves were awkward to load since the British Army used rimmed ammunition.

Types of grenade carried by the Parachute Regiment in the field included the No. 36 Bomb or Mills Bomb, the Bakelite No. 69 concussion grenade and No. 77 phosphorous grenade. Depending on the individual, No. 36 grenades could be thrown around 25yd (23m) and were highly effective. The No. 77 phosphorous grenade was used primarily to produce smoke screens, but was also highly effective for clearing buildings or bunkers.

The Projector Infantry Anti-Tank or PIAT for short was the main anti-armour weapon carried by paratroops in the field from 1943 onwards. This fired a hollow-charge round effective up to 100yd (91m) against most German armour. It was heavy to carry, and its spring mechanism required considerable strength to cock. Perhaps its greatest drawback was the heavy weight of its bombs (2½lb/1kg each), which meant only a limited number were carried in combat by its two-man crew. In addition, a number of No. 75 Hawkins mines, sticky bombs and No. 82 Gammon grenades added to the available arsenal for destroying Axis tanks. The latter was invented by Captain Arthur Gammon of 1 Para and consisted of a cloth stockinette bag filled with different amounts of C-2 (an early form of plastic explosive). This simple but highly effective short-range weapon was armed by removing a screw cap on its top to expose a weighted tape that unwound in flight when it was thrown.

The 2in mortar provided a fast, flexible source of indirect fire support at section and platoon level, capable of firing high explosive, smoke and illumination rounds. This primitive weapon, little more than a tube with a simple firing mechanism and a small base plate, was operated hand-held with the spade or base plate held firmly against the ground. A round was fired by simply dropping the shell down the short barrel, after which the angle was readjusted for the next shot. It had a maximum range of 500yd (457m), although it had far greater accuracy up to 300yd (274m). An even lighter parachute version – the 2in mortar Mk VIII – was produced for the airborne forces later in the war with its barrel cut down to 19in (48cm).

A scene at RAF Harwell, Oxfordshire, just before the start of the airborne invasion of Holland. British airborne troops wait to emplane by their Horsa glider. (IWM – CH13859)

The main source of fire support available within each parachute battalion came from four venerable .303 Vickers medium machine-guns and a platoon of eight 3in mortars, each capable of being broken down into individual loads that could be airdropped with a paratrooper, normally handled by the strongest men in each battalion because of their size and weight.

The water-cooled .303 Vickers MMG was a powerful and accurate medium machine-gun that formed the standard support weapon in British infantry battalions during World War II. It was capable of sustained force for considerable periods of time and could be used for both direct and indirect fire support. Its main drawback, however, was that it was heavy and bulky to carry in the field and consumed ammunition at an alarming rate. It was broken down into four loads, including ammunition, for parachute drops.

The 3in mortar fired smoke and HE bombs at high-trajectory into enemy positions. It consisted of a hollow tube with a firing pin at its bottom, a bipod stand and heavy base plate to absorb recoil. This comparatively crude heavy weapon could be broken down into three loads for a parachute descent assault and then manhandled over a battlefield, but a major drawback was that each bomb weighed 10lb (4.5kg). With a range of up to 1.6 miles (2.5km) and a maximum rate of 15 rounds a minute when used by a well-trained crew, it was a powerful source of indirect fire support.

The uniform worn by members of the Parachute Regiment from the outset differed from regulation issue in many respects. It underwent considerable development throughout World War II.

The headgear initially worn by British paratroops on and off duty in the UK was that of individual officers' and men's parent units, since they were just attached. On operations, a flying helmet made of leather was worn by the first paratroops, but was soon replaced by a canvas issue with thick chunks of sorbo rubber padding around its rim. The first steel helmets issued had a hard, black rubber rim, but were later replaced with ones without.

The first British paratroops wore standard battledress, 1937 pattern web equipment and a long sleeved grey-green cotton jacket, modelled on German issue, fastened between the legs by press-studs. This jacket was intended to present a smooth outline to the slipstream when paratroops left the aircraft and prevent rigging lines snagging on webbing and other pieces of protruding equipment. Experiments were also carried out with other items of equipment modelled after those employed by German Fallschirmjäger, including knee and elbow pads. Experiments with crepe-soled high boots, for example, were soon abandoned as simply too expensive and unnecessary. Ammunition boots were worn in their place.

The men of the Parachute Regiment went into battle by September 1944 wearing a distinctive uniform, very different from normal line infantry, as a result of careful development and experience gained on operations.

The distinctive paratroop rimless steel jump helmet worn by 1944 had black leather straps and a chin strap designed to provide protection on landings and during ensuing combat operations. It was normally worn fitted with camouflage netting, scrim and hessian to break up the outline. On campaign many chose to discard this heavy piece of equipment and the protection it afforded and simply wore the maroon 'red beret'.

The standard battledress issued to line infantry also underwent some modification for use by airborne troops. Although the standard heavy wool battledress blouse went unchanged when used by paratroops, the load-carrying capacity of the trousers was increased. A bellows pocket, for example, on the left thigh replaced the patch map pocket on the 1941 airborne pattern battledress trousers, which also had pockets lined with chamois. A thigh pocket was also added.

The extremely practical, hard-wearing and distinctive Denison smock was introduced in 1942, worn over battledress, and had a basic mid-green colour with a random overprint of dark green and brown patches. Over time the basic green faded into a sandy colour. Early versions had a half-length zip, storm cuffs and buttoning tightening-tabs on the side of the skirt. A tail fastened between the legs by press tabs prevented the smock riding up during a jump. To make them wind proof many soldiers sewed the tops of socks into the cuffs. Usually only NCOs wore insignia on a smock. Officers were issued with a distinct type of Denison smock with pale fawn knitted cuffs and collar lining and a full-length zip. Some officers wore field breeches.

A pale green cotton sleeveless 1943 jacket was sometimes worn over the Denison smock and webbing during parachute jumps. It had a frontal zip and press-studs to fasten it between the legs and was widely worn at Arnhem.

The Denison smock/sleeveless jacket was worn in combat with full '37 pattern web equipment over, with the addition of various types of equipment. Troops either wore skeleton order consisting just of ammunition pouches and webbing straps, with a water bottle, an entrenching tool, respirator bag and bayonet frog in the back, or light marching order including a small pack worn on the back. Large packs or A-frame Bergens were normally dumped at a central location to be picked up later. Other equipment included camouflage face veils used to break up outlines and toggle-ropes that could be used for a variety of tasks. They normally went into battle festooned with weapons and as much ammunition in bandoleers for their own and support weapons as could be carried.

Normal issue ammunition boots remained standard footwear and unpopular web gaiters were also worn by all ranks.

Everyday life experience

The everyday life of paratroops while awaiting deployment in the United Kingdom was largely one of hard, unremitting training in anticipation of the next 'Op'. Considerable effort was required by officers to keep men at a pitch of physical fitness, combat effectiveness and high morale.

The men of the Parachute Regiment lived in wartime barracks or even requisitioned stately homes scattered across the UK. A typical day in barracks commenced at 06.00hrs with reveille, with hard physical training carried out before breakfast. Food was of a good standard and in generous proportions for wartime Britain given the high tempo of physical activity. Following breakfast, a weapons inspection was normally carried out after which the morning's training commenced tailored to the role of each soldier. For crews of heavy weapons, for example, much work was devoted to stripping, cleaning and rapidly putting Vickers guns and 3in mortars back into action, as well as carrying individual parts over long distances. For the infantry, skill-at-arms occupied much time, as well as fieldcraft, camouflage and concealment. Lunch would normally be followed by more weapon training, lectures or films with the working day ending at about 16.00hrs. Frequent exercises were held by day and night in the surrounding area to practise the essential skills required by lightly equipped assault troops.

Troops of 1st Airborne Division are welcomed into Oslo by Norwegian civilians, 13 May 1945. (IWM – BU6183)

The paras played hard off duty as well, with heavy drinking and brawling a frequent feature of life. A penalty was always paid by those caught by Military Police, which included forfeiture of pay, irksome extra duties or a spell in the guardhouse. Indeed, the oft-trumpeted reputation of paratroops in itself helped cause rivalry and provoked fights with soldiers drawn from other units eager to prove their own mettle and that of their unit. In part this fighting was a deliberate attempt to uphold the paratroopers' reputation for toughness and aggression.

The maintenance of such a high pitch of training and morale over prolonged periods in parachute units without seeing action always presented senior officers with a profound problem. As Colonel Hill, an early commanding officer of 1 Para, described:

> First we were going to capture Alderney and hold it for a short time. That was cancelled. Then we trained for the Dieppe raid. We got as far as being loaded in the aircraft when a front came in and the operation was postponed for a month. Mountbatten decided to simplify the operation by eliminating one of the weather-dependent factors, so we were out and the commandos were given our task. I nearly had a mutiny on my hands; it was a hell of a job keeping the men happy.[12]

This was not to prove an isolated problem.

The 1st Airborne Division in the summer and early autumn of 1944 was, in the words of Major General Roy Urquhart, its newly appointed GOC, 'as battle hungry to a degree which only those who have commanded large forces of trained solders can comprehend'. He goes on: 'In fact, there were already signs of that dangerous mixture of boredom and cynicism creeping into our daily lives. We were ready for anything.'[13] A succession of false starts – 15 between D-Day and Operation *Market Garden* – marked 1st Airborne Division's experience as planned operations were overtaken by rapidly changing events and cancelled. On four occasions aircraft had been loaded and on one occasion were already in the area. Indeed, one wry company commander dubbed 1st Airborne Division as being 'The Stillborn Division' given these repeated occurrences. It often caused a mounting sense of frustration, annoyance and discontent in the ranks. Like the commandos, the Parachute Regiment suffered from growing cynicism, disillusionment, boredom and even in some cases indiscipline in the ranks. In the words of 1st Parachute Brigade's Brigade Major, 'A feeling of total exasperation and despair was felt by many of us on 1st Parachute Brigade. If we had been asked to drop in the middle of Berlin and wait for the Russians, we would have gone quite cheerfully.'[14] Before Arnhem, absenteeism amongst ORs on leave increased as did the incidence of fights with US troops or alongside US troops against the common enemy – the Military Police. As frustrating months passed with little prospect of actual fighting, many men re-applied to join their original units, which offered greater prospect of active service following the invasion of North-West Europe. As Captain Francis Hoyer-Millar, a company commander in 2 Para, later recalled:

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[12] *Thompson, op cit, p. 40.*

> It could be said that by June 1944 we had peaked and when we were left sitting around, not knowing what was going to happen next, people got a little browned-off ... It was fairly obvious that people were getting impatient and men started to overstay leave etc. I wouldn't say it was ill discipline, the battalion was always wonderfully disciplined, but perhaps 'a certain amount of wildness' is the best way of describing it.[15]

Battle experience

The experience of battle for British paratroopers was the culmination of the difficult selection process, parachute training and gruelling infantry training. Given the nature of most large-scale airborne operations – Sicily, Normandy, Arnhem and the Rhine crossing – combat was nearly always a bloody, brutal and indeed often bewildering business for those involved. For paratroops, intense fighting often took place at close quarters, fully testing the mettle of these elite units. Heavy casualties, both during the initial landing and in subsequent operations to seize key objectives in advance of conventional troops, were par for the course. Although the operations were normally of short duration, on occasion British paratroops were committed to lengthy periods of ground combat, for which their organization, equipment and training were unfitted. In many respects the ultimately abortive battle of Arnhem in September 1944 formed the most difficult operation ever fought by British airborne forces during World War II and the sternest test of battle for British paratroops during the war. The experience of those involved in the landings by

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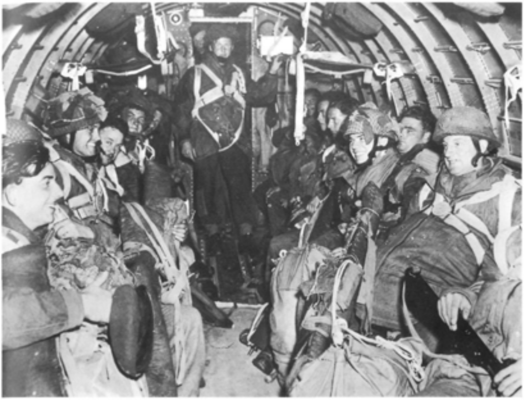
[13] *Major General R. E. Urquhart,* Arnhem *(London: Cassell, 1958), p. 18.*

[14] *Thompson, op cit, p. 152.*

[15] *David G. van Buggenum,* B Company Arrived: The Story of B Company of the 2nd Parachute Battalion at Arnhem, September 1944 *(Renkum, 2003), p. 10.*



British paratroops of 1st Parachute Brigade inside a C-47 Dakota, either about to take off or in flight, on Sunday 17 September 1944. This picture gives some idea of the amount of equipment carried into battle by the paratroops. In addition to their leg bags, two of the men have special weapons cases, probably to protect machine-guns. Note the quick-release ring at the centre of the parachute harness on each man's chest. (IWM – K7586)

1st Airborne Division in Holland had much in common with earlier large-scale airborne operations in terms of the approach to battle, initial landing and subsequent pitched fighting. Perhaps the only significant difference, however, was the extremely large number of casualties and men who sat out the remaining months of the war in Nazi prisoner-of-war camps dotted across Germany.

The airborne drop and approach to battle

1st Airborne Division had never fought as a formation before when it was finally committed to battle in September 1944, although many of its subordinate brigades and units had seen extensive combat experience in North Africa, Sicily and Italy. Its officers and men went into battle with great confidence and high morale. As the CO of 2 Para later wrote, 'I don't think any of us had any doubts as to the ability of any part of the forces engaged to fulfil their role.'[16] Men boarding the aircraft were heavily weighed down with arms, weapons and equipment. Andrew Milbourne, serving in 1 Para, recalled, 'What with our personal arms, rations and a mass of other kit, the whole bunch of us must have looked like over-burdened Christmas trees. Believe me, we felt like it too. Even to reach for a cigarette was an effort.'[17] For many men, boarding the waiting Dakota transport aircraft was the transition from peace to war. As the aircraft left Britain, anxiety was understandably rife. As one company commander recalled:

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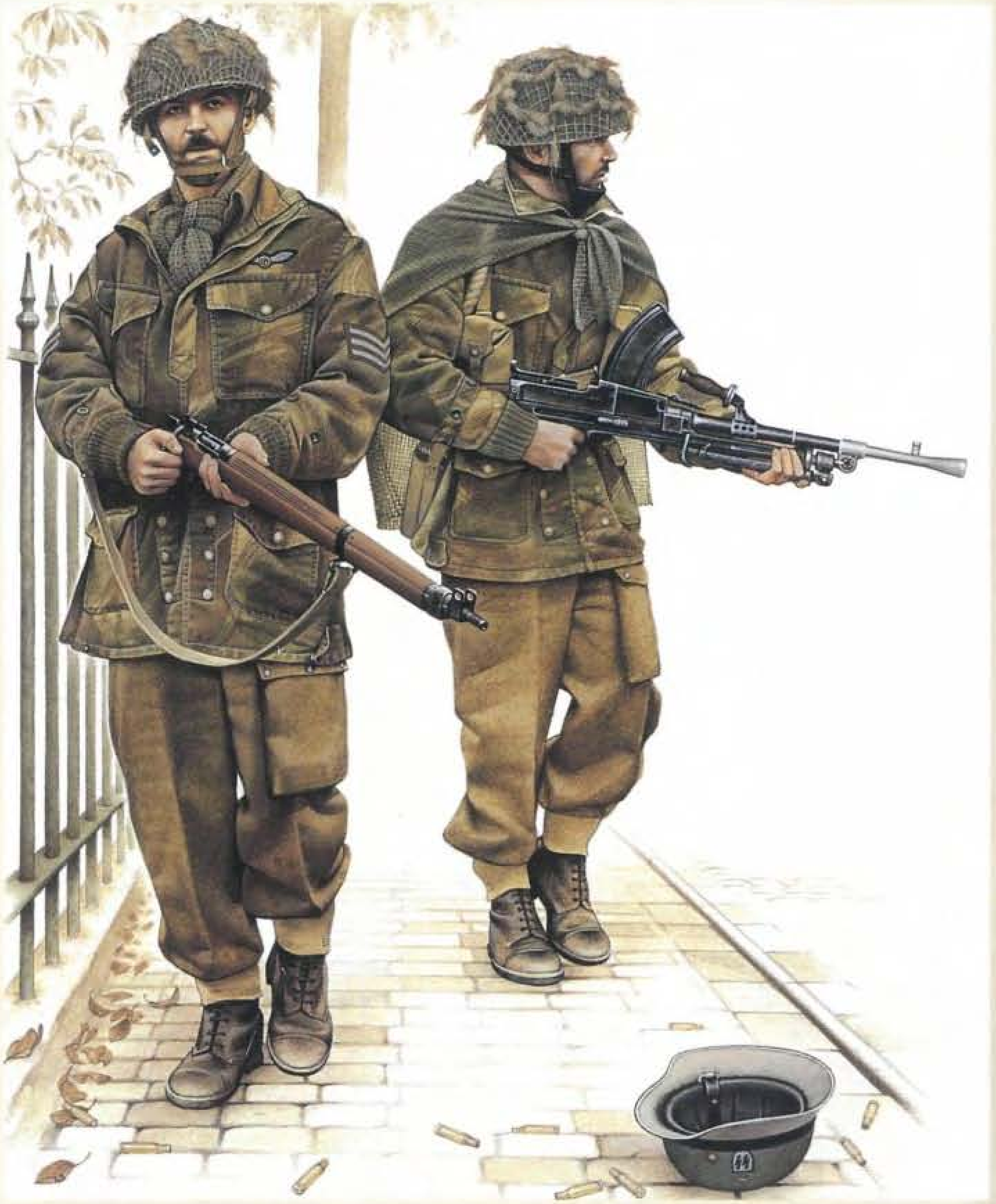
[16] *Frost, op cit, p. 203.*

[17] *Andrew Milbourne,* Lease of Life *(London: Museum Press Limited, nd), p. 26.*

ARNHEM, 1944

On the left is a sergeant from the Glider Pilot Regiment wearing the Denison smock, of green windproof cotton printed with brown and dark green camouflage, the base colour faded to a greenish sand shade. The tail, which fastened between the legs to stop the smock riding up during a jump, hangs down at the back here – the press studs broke easily. This Horsa pilot wears the Second Pilot's glider 'wings' on the left breast and carries the .303 Rifle No. 4. The Bren gunner on the right is from the 1st Airborne Division. He wears almost the full set of airborne fighting equipment, including a helmet with camouflage netting, scrim and hessian; a 'face veil' worn over the shoulders; and a toggle rope. He carries the .303 Bren Mk I light machine-gun. (Kevin Lyles © Osprey Publishing Ltd)



> A stream of possibilities rushes through your mind. Will your 'chute open? Will your landing be a good one, or will you hit a tree, or a house, or break a leg – it's not good to be incapacitated on a dropping zone! Will the enemy be firing across the dropping zone? ... If the answers to all these doubts proved to be favourable, then only the battle would lie ahead.[18]

While aboard the aircraft the reaction to stress amongst the paratroops differed widely, with some men whistling or singing to pass the time, others talking incessantly and some just remaining silent as they approached Arnhem.

The first experience gained by British paratroopers at Arnhem was that of the pathfinders of 21st Independent Parachute Company, which fell to earth exactly where planned and set up Eureka radar homing beacons and marker strips for the main body of aircraft travelling behind. Apart from sparse small-arms fire opposition was minimal. This vital role completed, the pathfinders went to ground in hasty defensive positions around the drop zones, ready to let off smoke signals and yellow markers, awaiting the arrival of the main body of transport aircraft and gliders following not far behind.

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[18] *Major Victor Dover,* The Silken Canopy *(London: Cassell, 1979), pp. 83–4.*

The initial landing by the first wave of 1st Airborne Division went like clockwork. Indeed, it landed at Arnhem with far fewer losses during the landing phase than ever experienced before by British paratroops, apart from the inevitable injuries caused by heavy landings, occasional parachutes failing to open and sporadic small-arms fire. For many paratroopers this was the first experience of jumping out of an aircraft into battle. The elation and exhilaration of a successful and largely unopposed parachute landing, with all limbs intact, quickly gave way to a frenzy of activity as scattered paratroopers orientated themselves, collected equipment from nearby canisters, hurriedly re-organized into sections, platoons and companies, and set out to secure their first objectives. A good half, however, had to remain to protect the drop zones needed by the following waves spread over the next few days.

The attitude of many British paratroopers to the battle lying ahead for the possession of Arnhem as the advance to contact began was mixed. Those lacking combat experience were perhaps the most eager to fight and to take risks in order to win. For some men of 1st Airborne Division at Arnhem this was a battle too many, especially for the veterans of previous hard-fought campaigns in North Africa, Sicily and Italy. As one signaller with 2nd Parachute Battalion wrote:

View from the cockpit of a Horsa glider during the airborne drop east of the Rhine, 25 March 1945. (IWM – BU2351)

> I remember having that Christ-here-we-go-again feeling. I suspect I wasn't the only one to feel that way. Three months in England had done little to improve the warlike proclivities of most of us. When we were in Africa and Italy, home and the end of the war were so remote that we had a different attitude, not exactly 'do or die' but at least more of a willingness to accept whatever the fates might bring. Now after only a few short hours after leaving England ... with war news indicating the end in sight, there was a general feeling that this was not the time to get killed or maimed.[19]

Such battle-weary men had few illusions about German fighting prowess at this stage of the war.

The success of the first-wave landings was not to be repeated on successive days. Without the element of surprise, later waves of troop-carrying and supply aircraft were far less fortunate, with German flak units rapidly massed by the German High Command along predictable routes into the Arnhem battle zone. A heavy toll on aircraft packed with paratroops and gliders was exacted by German gunners. In the words of Major Waddy:

> The Dakotas were rocking and yawing in the turbulence caused by so many aircraft flying in close formation. Black puffs of bursting flak shells dotted the sky around us. We passed right over a flak gun. I could see the faces of the German gunners staring up. The American pilots did not flinch, pressing on straight and level. They were magnificent. A Dakota ablaze from wing-tip to wing-tip passed under our aircraft and crashed in flames.[20]

Other paratroops were subjected to intense small-arms fire from German ground troops operating in nearby contested landing zones.

The land battle: first contact with the enemy

On the first day of landing, 1st Parachute Brigade faced an 8-mile-long approach march to their objectives on foot through enclosed country and built-up areas, in many respects ideal for mounting ambushes and a protracted defence. The successful first landing, however, was not followed by a rapid advance into the centre of Arnhem as the plan of campaign demanded given the distance of the drop zones from their objectives. Indeed, only slow progress was made by troops displaying an acute lack of urgency, with occasional snipers and brushes with German troops causing the advance to halt. A combination of inexperience among the new men and 'stickiness' displayed among the experienced older hands kept 3 Para bogged down. To one man in 1 Para the initial advance was like many an exercise he had completed in England. To add to the air of unreality the advancing troops were warmly welcomed by Dutch civilians eager for liberation from the German yoke. To quote Lieutenant R. H. Levien, 'En route we were feted by the jubilant Dutch. There was an abundance of orange flowers as well as water, milk, tomatoes, apples, pears and even tomato juice.'[21] According to Private Sidney Elliot

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19 Thompson, op cit, p. 164.

20 Ibid, pp. 172–3.

21 van Buggenum, op cit, p. 23.

Troops of 1st British Airborne with Sten sub-machine-guns, dug in to defend the Oosterbeek pocket beside their jeeps, late on Monday 18 September. Note that one is a signaller, still wearing his earphones and using the 22 radio set in the jeep beside him. This picture gives a good impression of the limited view from ground level of both sides when fighting in the pocket. (IWM – BU1143)

f 2 Para, 'The Dutch population rushed out of their houses, cheered us, shook hands, gave s drinks, apples and marigolds – and some of us were lucky enough to receive the odd iss. How could this be war?'[22]

1st Parachute Brigade soon encountered unexpectedly heavy resistance from a hastily mprovised German blocking force, composed of infantry, tanks and self-propelled guns, orming part of SS-Panzergrenadier Training and Reserve Battalion. As one paratrooper ecalled, 'Moving up the road, the whole scene reminded me of a scene back in England. Suddenly the scene changed. Machine-guns began their deadly chatter. Shells began to burst amongst us. Yells and whistles filled the air.'[23] Another para later recalled:

> The Jerries brought up lots of SS troops and tanks and we got into a hell of a big fight. I dived into some houses with my mates and we knew we were in for it. We had not expected such opposition and knew that we could not cope with the tanks without heavier support than we ourselves had. We started to move through and behind the houses to outflank the Jerries and succeeded in doing so. But after we had opened up on them they turned everything on to us and that was when I was knocked out of the battle.[24]

These were clearly not the second-grade German troops British intelligence had predicted would be encountered at Arnhem. In many respects the close terrain and buildings were ideal for defence by the Germans, whose snipers and small parties of infantry hindered and, in some cases, even paralysed movement. The élan and high morale

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[22] *Martin Middlebrook,* Arnhem 1944: The Airborne Battle, 17–26 September *(London: Viking 1944), p. 146.*

[23] *Milbourne, op cit, p. 29.*

[24] *Edmund L. Blandford,* Green Devils – Red Devils: Untold Tales of the Airborne in World War II *(London: BCA, 1993), p. 165.*

1st Airborne Division paratroops assemble on the landing zone at Arnhem during Operation Market Garden. *(IWM – BU1124)*

of many paratroopers and fierce pride in their unit quickly manifested itself on numerous occasions during the initial advance into Arnhem. As one paratrooper recalled, 'We heard not only the now familiar sounds of shots, explosions and screams but something else as well, the battle cry of the 1st Para Brigade: "Waho Mohammed!"'[25] On occasion German units were completely surprised by advancing paratroops. One officer, who watched a party of Germans lining up in threes at the side of the road just after debussing from their vehicles, later described, 'It was only seconds before PIAT bombs were exploding in the midst of the Germans. There were about eighty of them and by the time the five bombs had landed only a few were still interested in the war … In the light of the flames we could see just what we had done. It was a very unpleasant sight.'[26] First sight of the enemy at close quarters brought mixed reactions. As James Sims observed, 'Some of the German casualties were SS men, distinguishable by the runes on their collars. I was curious to see what these supermen looked like, but, apart from their uniform, they were just like us.'[27]

The main advantages possessed by paratroops – shock, surprise and concentration at the decisive point before the enemy could react – had been lost. In particular, the appearance of enemy tanks, self-propelled guns and armoured cars was an unpleasant shock, since the paratroops, with only small quantities of anti-tank weapons and limited ammunition for them, were always vulnerable to German armour. As one officer wrote after his platoon scattered after encountering a single German tank, 'The platoon did not seem to be too shaken by the experience but had quickly learned that advancing straight down a main road against armour with no anti-tank weapons was no way to get to the bridge.'[28] Another

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25 Sims, op cit, p. 47.

26 Dover, op cit, p. 93.

27 Sims, op cit, p. 44.

28 Middlebrook, op cit, p. 132.

young soldier put it even more succinctly: '"Tanks!" No warning strikes more fear into the lightly armed infantryman; St George was better armed to meet his dragon than we were to take on the might enemy Panzers.'[29]

The British paratroops' lack of mobility, firepower and armour in comparison to their opponents quickly became evident in the encounter battles fought in the outskirts and then the built-up centre of Arnhem. As Major General Robert Urquhart later wrote, 'A built up area is hell for the attacker and asset for those in defence, as we discovered ourselves during the later stages of the battle.'[30] Advancing in the open along roads dominated by buildings proved an unnerving experience, with unseen snipers and small parties of infantry opening fire. Casualties mounted, ammunition was rapidly consumed, and the British paratroops became quickly exhausted. Attempts to outflank German positions failed, and breaking through dug-in conventional troops backed by armour simply proved too much for lightly equipped airborne soldiers lacking heavy support and possessing only limited ammunition. The result was predictable: heavy casualties and failure. With casualties mounting, men of 1st Brigade took shelter in surrounding houses, effectively fragmenting subunits and causing a loss of command and control. The chances of these units reaching their objective and then fighting their main battle in defence had vanished.

The 2nd Battalion, however, was the only unit to achieve its objective by moving quickly, bypassing resistance and choosing a far less defended route near the city. A sizeable portion of the battalion, along with smaller detachments from other airborne units, was able to fulfil its role by reaching an objective, digging in and fighting a defensive battle on ground of its own choosing, blocking the road bridge. It was in considerably less strength, however, than planned, having lost a third of its infantry strength en route. For those quickly digging in or fortifying nearby houses, a sense of elation was experienced: 'We felt quite pleased with ourselves for we had dropped sixty miles behind the enemy lines, fought our way into a large town and captured the northern end of our main objective, the road bridge.'[31] Others struggling to rejoin their parent battalion, however, were cut off and surrounded in houses and back gardens by superior German forces and surrendered.

Street fighting in Arnhem and the defence of Oosterbeek

The intensity of fighting in Arnhem quickly mounted as 1st Para Battalion, reinforced by the South Staffords and 11th Para Battalion, and then later elements of 1st and 4th Parachute Brigades, struggled to relieve their beleaguered comrades at the road bridge. A series of confused street battles, mostly conducted at very close range, were fought against stiffening German resistance. For British paratroopers the experience was one of hard, unremitting street fighting against increasingly heavy odds. The lightly armed paras, increasingly short of ammunition, simply lacked the firepower to advance against a fresh, dug-in opponent equipped with heavy weapons and backed by growing quantities of tanks and artillery. The ensuing street fighting proved a harrowing experience in which élan and aggression were simply not enough. As one paratrooper recalled, 'There were Germans stationed at every corner and dug in with machine-guns sited in every direction, with tanks and self-propelled guns parading up and down, popping off whenever they saw a red beret.'[32] Movement was largely confined to through back gardens and across line after line of high wire netting and concrete panel fences. As one described, 'I remember negotiating garden walls and going from one house to another, in through doors and out through the windows using our toggle ropes. Sometimes close enough to use grenades, other times upstairs at windows shooting at any target that presented itself anywhere.'[33] The experience of Lieutenant Tom Burgess in many ways was typical:

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[29] *Sims, op cit, p. 43.*

[30] *Urquhart, op cit, p. 200.*

[31] *Sims, op cit, p. 48.*

> Before long some German armoured cars and a tank began probing the street while their infantry began infiltrating the gardens. We opened fire and drove them back, but the tanks and armoured cars opened fire and the whole house started to fall apart on us. We rushed downstairs as the roof and upper floors collapsed, but one or two men were caught in the mess. We were shooting out of the back and front, but the enemy armour came right up to us to the front and fired at point-blank range and it was over for us.[34]

Two key problems quickly surfaced common to all airborne operations: ammunition supply and care of casualties. Following 4th Parachute Brigade's abortive advance through the woods near the pumping station on 19 September, Captain Nick Hammer, the Adjutant of 10 Para, wrote:

> We had been moving fairly quickly, and it happened suddenly. But it was what we would have expected – that the leading company would be held up and then overcome the resistance, only they didn't overcome the resistance. The Germans had the usual MG-42s – the standard German light machine-gun, very fast firing, twice as fast as the Bren – and of course there were tracked vehicles; you could hear the squealing of the tracks and the engine noises ... That was a very frightening noise if you were a parachutist.[35]

10 Para made no real progress while taking part in what was the last purely offensive action carried out by paratroops at Arnhem. 10 and 156 Para Battalions withdrew the following day south of the railway. Indeed, by the end of the attack on 19 September, 1st and 4th Parachute Brigades had suffered crippling casualties. 1st Parachute Battalion had only 50 unwounded men and 3rd Parachute Battalion fielded just 116 men. In total, by the end of the day, 4th Parachute Brigade had only 250 effectives.

This hard street fighting that characterized the experience of most paratroopers at Arnhem was for many men crowned by surrender. During the initial fighting, for example, many large and small parties were cut off and isolated behind the front line and after food and ammunition were exhausted had little alternative than to throw in the towel. To quote Major Victor Dover, 'I had never seriously given a thought on the possibility of being taken prisoner and cannot describe what the first moments of capture are like, but every

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[32] *Blandford, op cit, p. 76.*

[33] *van Buggenum, op cit, p. 101.*

[34] *Blandford, op cit, p. 179.*

[35] *Middlebrook, op cit, p. 263.*

Men and supplies drop from transport planes above Nijmegen. (IWM – EA38796)

prisoner-of-war knows. The knowledge of failure and that there is no second chance is difficult to accept.'[36] Following a successful ambush, Private Fred Morton of 3 Para, occupying a house, was forced to admit defeat when faced by German infantry and tanks: 'We decided that enough was enough. The tank officer … told us we had fought well and that we would be treated well if we surrendered. For you the war is over.'[37] For those British paratroops whose surrender was accepted in the heat of battle, interrogation and German POW camps awaited until the end of the war. On occasion, in the heat of battle both sides refused to take prisoners. As a member of 1 Para later described, 'Small skirmishes occurred every so often. During one of these encounters a German soldier emerged from the trees, and one of the NCOs went out to bring him in. As he did so, other Germans under cover shot him. From then on we said, "No prisoners" (we had nowhere to put them anyway).'[38]

The experience for wounded paratroopers awaiting treatment often proved to be harrowing. Following their hasty removal from the battlefield and initial treatment, wounded paratroopers faced long periods of waiting for promised relief by ground troops before they could be evacuated to hospitals. Brigadier John Hackett, himself wounded at Oosterbeek, later described an aid post set up in the Hartenstein Hotel:

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[36] *Dover, op cit, p. 104.*

[37] *Middlebrook, op cit, p. 314.*

[38] *Ibid, p. 139.*

> Inside there was a young medical officer, harassed but efficient, trying to deal with many more casualties than his resources allowed. There was blood and torn clothing on the floor. Men were strewn about with that air of settled resignation upon them which you see on the wounded once the army medical people have taken them in charge.[39]

At Arnhem many wounded experienced long periods in overcrowded casualty clearing stations close to the front line. On several occasions truces were successfully arranged between the protagonists, and the Germans allowed vehicles to move the wounded or transported them themselves to nearby hospitals for treatment. For nearly all the British wounded who survived, German hospitals and prison camps lay in store until the end of the war.

The troops occupying hastily fortified buildings at the northern end of Arnhem's road bridge fought a bitter defensive battle from the outset under mounting German pressure. A series of initial attacks were conducted at heavy cost to the enemy. When occupying a defensive position British airborne troops – especially in built-up areas or in close country – proved capable of fending off much larger forces. As one private later recorded, 'This was now a very hazardous place and we felt more than pleased with ourselves. Despite Jerry's local superiority in tanks and manpower, we had been giving him a good hiding. Of course the German tanks were at a disadvantage in street fighting as they had been sent down concrete defiles manned by troops renowned for their skill in defensive action.'[40] Despite mounting casualties and as anti-tank and small-arms ammunition neared exhaustion morale remained high. In the words of the commanding officer:

> They were all in high spirits. There was barely one who could not claim to have killed an opponent. 'Our most enjoyable battle,' they said, and, 'Let us always fight from houses,' or 'The more they come the merrier' and so on. Not that there was anything extraordinary in this; all the way through, however hard or dangerous the going, they were always cheerful and always ready to give more than one thought it possible to ask.[41]

The gallant defenders were subjected to intensive mortar and artillery bombardment, as well as intense small-arms fire whenever the Germans spotted likely targets. As James Sims noted, 'Now death stalked the streets around the northern end of the bridge. It lurked in the pall of thick black smoke that hung over us; it kept watch in the gardens and streets for the unwary and cut them down.'[42] When ammunition for PIATs and the handful of towed 6pdr anti-tank guns accompanying the advancing airborne troops was exhausted or weapons were destroyed, German armoured cars, tanks and self-propelled guns played a decisive role.

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39 General Sir John Hackett, I was a Stranger *(London: Chatto & Windus, 1977), p. 12.*

40 Sims, op cit, pp. 58–9.

41 Frost, op cit, pp. 224–5.

42 Sims, op cit, p. 68.

The arrival of German heavy tanks and self-propelled guns, to which the British now had little means of response, began a new phase of the fighting, with the systematic destruction from the top down of buildings held by the British paratroopers. Another paratrooper wrote, 'The enemy brought up a self-propelled gun to shell our building, and I happened to be manning a Bren gun in the right place to engage it and the infantry who were standing around. After getting off two short bursts, I observed what had all the appearance of a golden tennis ball at the mouth of the SP gun. The next moment I was lying on my back covered in dust and debris.'[43] Fires quickly caught hold in the buildings around the bridge and at night Arnhem burned around the surviving paratroops. On occasion, fierce counter-attacks were launched against German positions. In the words of Bernard Salt, serving with the 2nd Battalion Parachute Regiment:

> We charged the building we had to capture and almost at once the Germans started to throw down these little round hand grenades on us from upstairs windows ... Those of us who were wounded ... were quickly shoved into a public toilet as cover against what might come.[44]

With the mains water supply cut by the Germans as soon as flames took serious hold, the result was inevitable. In the words of Ted Cleverley, also of the 2nd Battalion Parachute Regiment, 'The fire made the building untenable and we had no means of extinguishing it. We pulled back to a window at the rear of the building facing the bridge. We cleared a window and sloped a table up to the window ledge. Now we could take a running jump out of the window and keep running.'[45]

Endgame at Arnhem

The attempts to relieve 2 Para and establish positions in and around Arnhem by 19 September had ended in dismal failure. The remnants of 1st and 4th Parachute Brigades, after being ground down in street fighting trying to break through to the road bridge, fell back in disorder towards a divisional perimeter established around Oosterbeek under heavy pressure from German infantry supported by tanks. With no other alternative available, 2nd Battalion Parachute Regiment was abandoned to its fate. By the end, the situation at the bridge was grim. As Captain Hoylar-Millar later recalled, 'I was as scared that night as any other but indeed there was a strange feeling of exhilaration mingled with pride and bitterness. We were still there after three full days and nights and, incredibly enough, alive and in one piece – though it seemed improbable that we would remain thus for much longer.'[46] On 21 September resistance ended at the road bridge, as the surviving officers, NCOs and men either ran out of ammunition or were simply overwhelmed.

The defence of the Oosterbeek perimeter, with troops intermingled amongst the trees and houses, was similar in some respects to that at the road bridge. It saw pitched defensive fighting between surviving British airborne troops fighting from buildings and in wooded terrain, against advancing German infantry, tanks and self-propelled guns. In the words of Private Jim Gardener, 'They came at us with all the fury they could muster. We got out of our trenches to meet the infantry and more than held our own but we gave ground against the tanks.'[47] A handful of 17pdrs and remaining 6pdr anti-tank guns provided the backbone of the defence against approaching armour. In improvised units the surviving men of 1st Airborne eked out their remaining ammunition, with fierce fighting raging for the possession of particular houses. Fortunately, instead of launching a single carefully coordinated attack, the Germans launched a series of dispersed infantry thrusts, each supported by a handful of tanks or SP guns. With relief impossible and the position untenable with the troops remaining, 1st Airborne Division finally withdrew across the Neder Rijn on the night of 25/26 September.

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[43] *Middlebrook, op cit, pp. 303–4.*

[44] *van Buggenum, op cit, p. 91.*

[45] *Ibid, p. 45.*

[46] *Middlebrook, op cit, p. 319.*

Defeat, disillusionment and growing pride

The experience of British paratroopers at Arnhem was crowned by bitter defeat, albeit one redeemed by the superb fighting qualities they had displayed during pitched battles against greatly superior odds. For all ranks Operation *Market Garden* had begun with a sense of great elation, optimism and confidence, which had swung to defeat and disillusionment by its end. An operation that promised a decisive victory to bring the war to an early end had resulted in a decisive defeat for 1st Airborne Division. Only some 2,587 dazed, exhausted and fought-out survivors made good their escape. A total of 1,300 were killed in action and approximately 6,450 were marched into prisoner-of-war camps scattered across Nazi Germany.

By 30 September, the remnants of 1st Airborne had returned home with their heads held high and received a hero's welcome. Although defeated, the officers, NCOs and men of the Parachute Regiment were justifiably proud of their performance in battle. A combination of factors had condemned them to fighting an offensive battle in built-up areas for which they were not organized, equipped or adequately trained. Their élan, 'airborne spirit' and sheer guts were simply not enough to break through the hardening German defences manned by SS units backed by heavy armour and artillery that no one had expected to be near the town. In defence they proved far more effective, however, and exacted a heavy toll on their opponents in and around Arnhem. Indeed, 2nd Parachute Battalion's defence of the bridge had been, in Gavin's words, 'the outstanding independent parachute battalion action of the war'.[48]

The courage and fighting qualities of the paras had clearly won the respect of their opponents. As Lieutenant Colonel John Frost later wrote, 'The SS men were very polite and complimentary about the battle we had fought ... No body of men could have fought more courageously and tenaciously than the officers and men of the 1st Parachute Brigade at Arnhem Bridge.'[49] In the words of Major Sepp Krafft, who had commanded the initial German blocking force, 'They were well trained, particularly for independent fighting, and of good combat value. The officers, graded in rank according to age, were the finest in the whole British Army, very well schooled, personally hard, persevering and brave. They made

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[47] *Ibid, p. 332.*

[48] *Thompson, op cit, p. 189.*

[49] *Frost, op cit, p. 231.*

British paratroopers being marched away by their German captors. (IWM – HU2129)

an outstanding impression.'[50] After German infantry burst into a cellar on 21 September filled with wounded from 10 Para, one Dutch civilian recalled, 'A German officer called out to me, "Do you speak English?" I said I did, and he told me to translate quickly, to tell the English they had fought like gentlemen, but they must surrender now and hand over their weapons, helmets and ammunition, also their watches and identification papers.'[51] Tributes were also received from many quarters in the UK. In the words of Field Marshal Bernard Montgomery, 'So long as we have officers and men who will do as you have done, then we can indeed look forward with complete confidence to the future. In years to come it will be a great thing for a man to be able to say, "I fought at Arnhem."'[52]

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[50] *Blandford, op cit, p. 187.*

[51] *Middlebrook, op cit, p. 346.*

[52] *Harclerode, op cit, p. 124.*

ARNHEM 1944

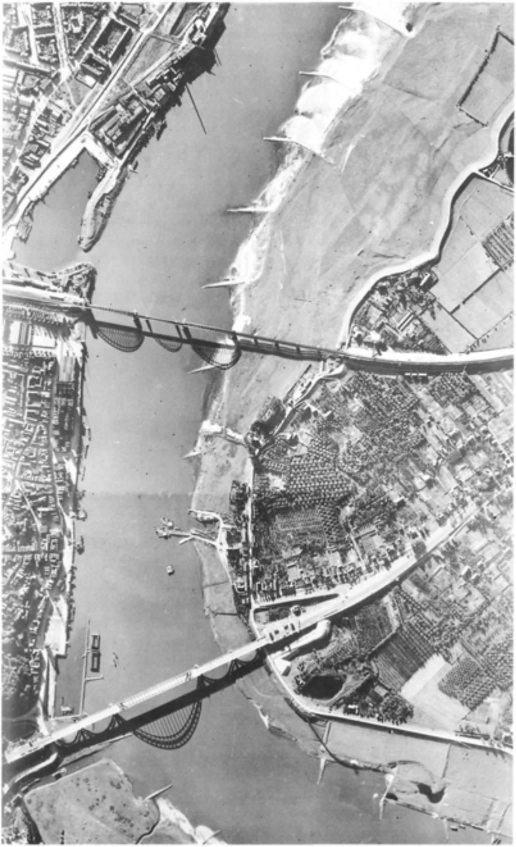
Stephen Badsey

The origins of the battle

The battle of Arnhem, known by its Allied codename of Operation *Market Garden*, was the largest airborne battle in history, and the only attempt in World War II by the Allies to use airborne troops in a strategic role in Europe. It was a battle of army groups numbering hundreds of thousands of men – 21st Army Group under Field Marshal Sir Bernard Montgomery against Army Group B under Generalfeldmarschall Walther Model – but repeatedly its outcome hinged on the actions of small forces and individual battalions at crucial points. Rather than a set-piece battle with a tidy beginning and end, it began on 17 September 1944 from a confused and daily changing pattern of events, and ended ten days later as the only major defeat of Montgomery's career, and the only Allied defeat in the campaign in North-West Europe.

The direct origin of the battle of Arnhem was actually Montgomery's greatest victory, the battle of Normandy. The destruction of the original Army Group B (Seventh Army and Fifth Panzer Army) in the Falaise pocket in August 1944 at the end of the battle was a disaster for Adolf Hitler's Third Reich. Of 38 German divisions committed to Normandy, 25 were completely destroyed, with at least 240,000 men killed or wounded, and a further 200,000 taken prisoner. Generalfeldmarschall Model, appointed on 18 August as both Commander-in-Chief West (Oberbefehlshaber West or OB West) and commander of Army Group B, found himself managing the rout of his shattered forces across northern France into Belgium and Holland.

In the planning before D-Day on 6 June, the Allies had assumed that they would advance steadily inland, with General Dwight D. Eisenhower, commanding Supreme Headquarters Allied Expeditionary Forces (SHAEF), taking over the land battle from Montgomery after a few weeks and directing the advance of his three Army Groups – Montgomery's 21st Army Group, 12th Army Group under Lieutenant General Omar Bradley, and 6th Army Group under Lieutenant General Jacob Devers coming from southern France – on a broad front against a strong German defence. Instead, the battle of Normandy had been weeks of hard-fought virtual stalemate followed by a sudden German collapse resulting in the Falaise pocket.



An aerial view looking west of the River Waal flowing through the centre of Nijmegen, taken by an RAF reconnaissance aircraft on the evening of 22 September at the height of the battle. The road bridge (bottom of picture) and railway bridge, both about 650m long, can be clearly seen (note the shadows showing the shape of both bridges). Although Browning's plan gave no priority to capture of the railway bridge, Allied engineers could convert such a bridge to take armoured vehicles within a day. (IWM – CL1203)

The very size of this victory was Montgomery's undoing. Success in Normandy had depended on cooperation between the various Allied members and services. Now, with the unexpected destruction of Army Group B, many on both sides believed that history was repeating itself, and that August 1944 in France was August 1918 once more, with Germany virtually defeated and bound to surrender before the year ended. Senior Allied commanders, taught to regard a successful war as just one episode in their developing careers, began to display openly the self-interest and concern for their own futures they had kept buried during the battle.

After some delay, Eisenhower was due to assume command from Montgomery on 1 September, establishing SHAEF Headquarters at Granville in western Normandy. On 13 August, as Army Group B's encirclement was being completed, Montgomery first raised with Eisenhower the idea of changing Allied strategy to a 'single thrust' advance by his own 21st Army Group, supported by First US Army under Major General Courtney Hodges, through northern France and the Low Countries and into Germany. Montgomery's point was that German opposition against him was negligible, but that there was not enough transport to keep all three Army Groups advancing at full stretch over 500km (300 miles) from Normandy. Even the fleets of Allied transport aircraft intended to mount airborne operations

CHRONOLOGY

1944

13 August	Montgomery suggests his 'single thrust' plan to Eisenhower.
16 August	First Allied Airborne Army formed.
23 August	Eisenhower gives priority to Montgomery's northern thrust.
26 August	XXX British Corps starts its drive from the Seine.
29 August	Third US Army starts to run out of fuel.
1 September	Eisenhower takes command of the ground battle from Montgomery.
2 September	Eisenhower adopts the 'two-thrust' plan.
3 September	Browning threatens resignation. Von Rundstedt recalled to OB West. XXX Corps liberates Brussels.
4 September	XXX Corps liberates Antwerp and halts. German First Parachute Army created under Student.
5 September	'Mad Tuesday' in Holland.
10 September	Brussels conference between Eisenhower and Montgomery approves *Market Garden*. Guards Armoured Division captures 'Joe's Bridge'.
16 September	First air attacks for *Market Garden* start after nightfall.
17 September	D-Day for Operation *Market Garden*, the start of the battle of Arnhem. I British Airborne Corps, XXX Corps, XII Corps attacks start.
18 September	Second airborne lift. VIII Corps attack starts.
19 September	Third airborne lift. XXX Corps reaches Nijmegen.
20 September	Assault crossing at Nijmegen. Main German attack on the Groesbeek heights.
21 September	Fourth airborne lift. Germans recapture Arnhem bridge.
22 September	Eisenhower abandons the *Market Garden* plan.
23 September	Fifth airborne lift.
26 September	Operation *Berlin*, the withdrawal of 1st British Airborne. End of the battle of Arnhem.
5 October	Last German attacks on the *Market Garden* corridor end.
7 October	Allied air raids close Arnhem bridge.
27 November	Last troops of First Allied Airborne Army leave the *Market Garden* corridor.
16 December	The German Ardennes offensive (the Battle of the Bulge).

1945

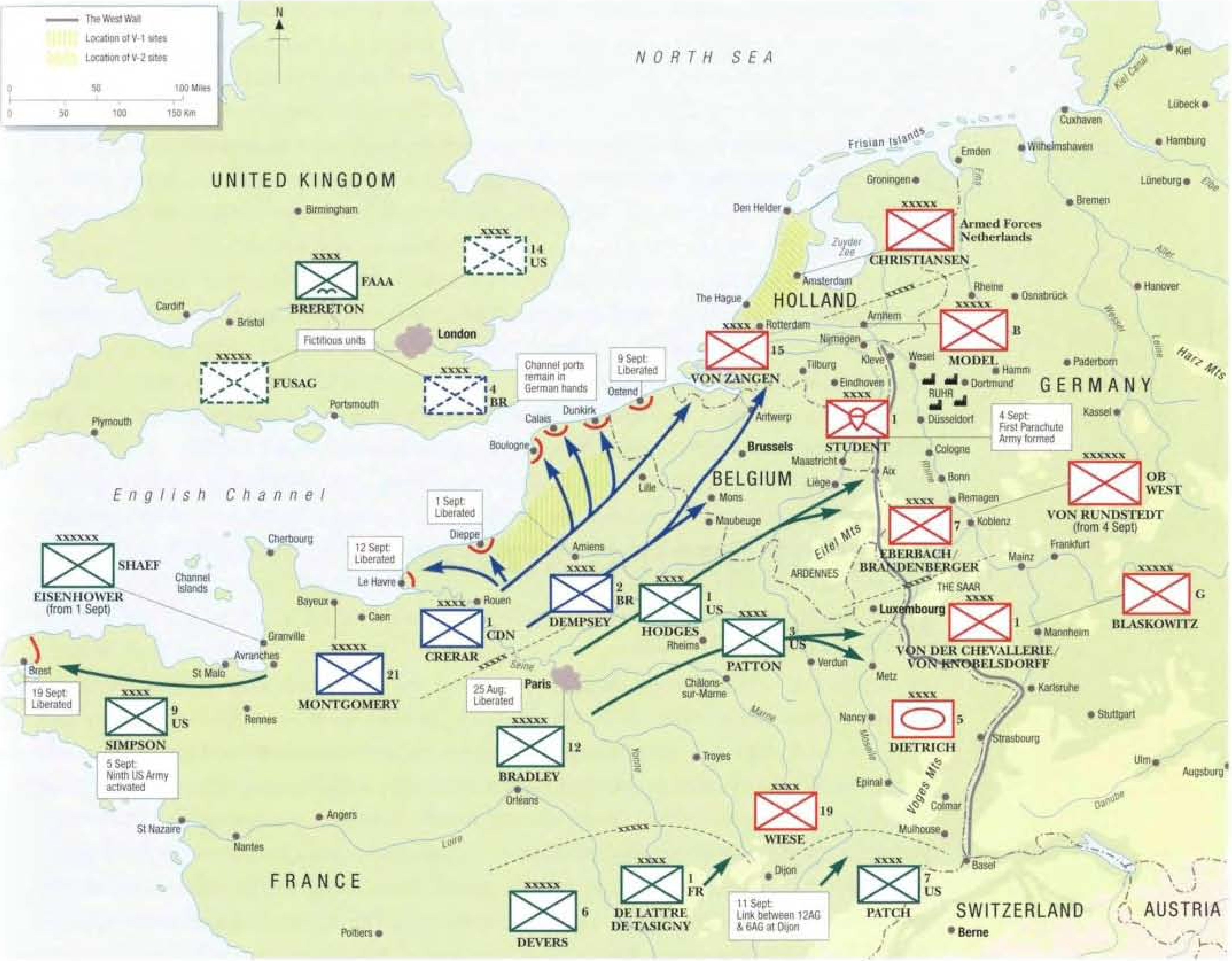
4 February	Germans destroy Arnhem bridge.
24 March	Operation *Varsity*.
14 April	Allied liberation of Arnhem.
8 May	V-E Day, the unconditional surrender of Germany.

were being committed to ferrying supplies to 21st and 12th Army Groups. Montgomery asked Eisenhower to appoint a ground commander to execute the 'single thrust', even offering to serve under Bradley if necessary, as long as the forces to the south gave up their supplies.

Whatever the merits of this argument, it was firmly opposed by Bradley, for whom Montgomery's conduct of the battle of Normandy had been profoundly suspect, and who was one of several American commanders who believed that they had won Normandy *despite* Montgomery, and not *because* of him. With final victory in sight it was time for American prowess to display itself, and Montgomery and the British were no longer a factor. Montgomery's plan would also have meant halting the American troops that had advanced furthest towards Germany, Third US Army under Lieutenant General George S. Patton Jr, Montgomery's old rival.

On 23 August, Montgomery at last pressured Eisenhower into agreeing that 21st Army Group's thrust into northern France should have priority in supplies (which Montgomery chose to interpret as absolute priority), to free the English Channel ports for Allied supply ships and overrun the launch sites for the V-1 'buzz-bombs' attacking southern England.

The Allied pursuit, 26 August to 10 September 1944.


The West Wall
Location of V-1 sites
Location of V-2 sites
0 50 100 Miles
0 50 100 150 Km
N
NORTH SEA
UNITED KINGDOM
Birmingham
Cardiff
Bristol
London
Portsmouth
Plymouth
XXXX FAAA BRERETON
XXXX 14 US
Fictitious units
XXXXX FUSAG
XXXX 4 BR
English Channel
Channel ports remain in German hands
9 Sept: Liberated
Ostend
Dunkirk
Calais
Boulogne
1 Sept: Liberated
Dieppe
12 Sept: Liberated
Le Havre
Cherbourg
Channel Islands
XXXXXX SHAEF EISENHOWER (from 1 Sept)
Bayeux
Caen
Rouen
Amiens
Lille
Granville
Avranches
St Malo
Brest
19 Sept: Liberated
XXXX 9 US SIMPSON
5 Sept: Ninth US Army activated
Rennes
XXXXX 21 MONTGOMERY
XXXX 1 CDN CRERAR
XXXX 2 BR DEMPSEY
XXXX 1 US HODGES
XXXX 3 US PATTON
Seine
Paris
25 Aug: Liberated
XXXXX 12 BRADLEY
Orléans
Angers
St Nazaire
Nantes
Loire
FRANCE
Poitiers
XXXXX 6 DEVERS
XXXX 1 FR DE LATTRE DE TASIGNY
11 Sept: Link between 12AG & 6AG at Dijon
Dijon
XXXX 7 US PATCH
Reims
Châlons-sur-Marne
Marne
Troyes
Yonne
Verdun
Metz
Nancy
Moselle
Epinal
Vosges Mts
Colmar
Mulhouse
Basel
SWITZERLAND
Berne
AUSTRIA
XXXX 19 WIESE
XXXX 5 DIETRICH
XXXX 1 VON DER CHEVALLERIE/ VON KNOBELSDORFF
Strasbourg
Karlsruhe
Stuttgart
Ulm
Augsburg
Danube
Mannheim
XXXXX G BLASKOWITZ
THE SAAR
Luxembourg
ARDENNES
Eifel Mts
XXXX 7 EBERBACH/ BRANDENBERGER
Mainz
Frankfurt
XXXXXX OB WEST VON RUNDSTEDT (from 4 Sept)
Koblenz
Remagen
Bonn
Rhine
Cologne
Aix
Liège
Maastricht
BELGIUM
Mons
Maubeuge
Brussels
Antwerp
XXXX 1 STUDENT
4 Sept: First Parachute Army formed
Düsseldorf
RUHR
Dortmund
Hamm
Kassel
Paderborn
XXXXX B MODEL
GERMANY
Harz Mts
Leine
Weser
Hanover
Osnabrück
Rheine
Wesel
Kleve
Eindhoven
Tilburg
Nijmegen
Arnhem
XXXX 15 VON ZANGEN
Rotterdam
The Hague
HOLLAND
Amsterdam
Zuyder Zee
XXXXX Armed Forces Netherlands CHRISTIANSEN
Den Helder
Groningen
Frisian Islands
Emden
Ems
Wilhelmshaven
Cuxhaven
Bremen
Aller
Lüneburg
Elbe
Hamburg
Lübeck
Kiel
Kiel Canal

Bradley's principal mission was to support this thrust with First US Army, sending most of its divisions north of Aachen. Instead, Bradley quietly connived at Patton's continuing southern thrust towards Germany, holding First US Army back and directing it increasingly south, away from 21st Army Group. At the end of August, as Third US Army's drive began to halt at the gates of Germany from lack of fuel, relations between Montgomery and the American generals could hardly have been worse.

Allied victory in the battle of Normandy had also depended very heavily on massive air support for the ground troops, a duty imposed for Eisenhower on the often reluctant airmen by Allied Expeditionary Air Forces (AEAF) under the unpopular Air Chief Marshal Sir Trafford Leigh-Mallory. On 15 August, Leigh-Mallory, also believing that the war in Europe was won, started to close down AEAF Headquarters and plan for his next posting. The Allied heavy bomber forces of RAF Bomber Command and USAAF 8th Air Force went back to their preferred strategy of bombing German cities, while the SHAEF tactical air forces split along national lines, with USAAF 9th Air Force supporting 12th Army Group and RAF 2nd Tactical Air Force supporting 21st Army Group. Since the Luftwaffe in the west barely existed, and the Allies enjoyed unquestioned air supremacy, this appeared not to matter.

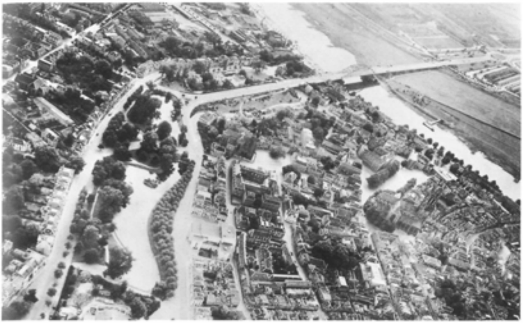
Before D-Day, SHAEF staff had identified the need for a new headquarters to coordinate the various Allied air forces for airborne operations, and as part of the disbanding of the AEAF Eisenhower created Combined Airborne Forces Headquarters on 2 August under Lieutenant General Lewis Brereton, the highly controversial former commander of 9th Air Force, who was disliked by Bradley. On 16 August this name was changed to First Allied Airborne Army as part of the Allied deception plan based around the fictitious First US Army Group (FUSAG), which had fooled the Germans for months.

Under pressure from Washington, where Army Chief of Staff General George C. Marshall and General Henry 'Hap' Arnold, commanding the Army Air Forces, both wanted a major airborne operation mounted in Europe before the end of the war, Eisenhower placed First Allied Airborne Army under 21st Army Group control. As the Allied supply crisis and dispute over strategy worsened, it was from this tangle of conflicting interests that an airborne solution, Operation *Market Garden*, started to emerge.

The opposing armies

The Allied forces

By September 1944, Second British Army had overcome most of the amateurism that marked British forces earlier in the war and was a victorious army at the height of its abilities. Even so, and although its artillery and engineers were excellent and its infantry almost unbreakable in defence, it had a reputation for slowness and poor coordination when attacking. Having borne the brunt of the heavy fighting in Normandy followed by the pursuit across France, it was also exhausted, with battle fatigue casualties running at epidemic proportions. It was badly short of troops, and to keep it up to strength Montgomery was forced to break up one division in early September. Those troops that were left, believing the war was virtually won, were increasingly reluctant to risk their lives in battle.



Arnhem town centre, taken looking south-east towards the road bridge by a Mosquito of RAF 2 Group, 2nd Tactical Air Force, during the preliminary bombing of German defences in the Market Garden *area on the morning of Sunday 17 September. The embanked section of roadway and the houses on the north side of the road bridge formed the site of Lieutenant Colonel Frost's defence. The flat ground to the south across the river was the planned landing site for 1st Polish Parachute Brigade. (IWM – CL1201)*

Second British Army had also outrun its own supplies, its tactical intelligence, and most of its air support. Almost half of 2nd Tactical Air Force was tied up with First Canadian Army, and the rest was searching for suitable airfields in Belgium. As German resistance stiffened, Lieutenant General Dempsey became deeply concerned at the weakness of the proposed northern thrust into Holland, and Montgomery agreed to a delay until 10 September. On that day, the Guards Armoured Division under Major General Allan Adair captured an intact bridge, promptly named 'Joe's Bridge', over the Meuse–Escaut Canal (50m wide) near Neerpelt, and became the natural choice to lead the advance of XXX Corps under the still sickly Horrocks.

Like other British armoured divisions, the Guards Armoured had abandoned its formal organization in Normandy, adopting a 'group' structure that paired an armoured battalion with a trucked battalion of the same regiment. Guardsmen were specially selected, and the division had a high reputation; but, as with other British divisions, the infantry shortage had forced it to reduce some battalions from three to two companies, and many of its recent replacements had come from other formations such as anti-aircraft artillery batteries. In all, the Guards Armoured Division probably numbered about 13,000 men and 200 tanks. After taking 1,400 casualties during two months in Normandy, it had lost a further 600 men in ten days' fighting along the Belgian canals, leaving it with few illusions about German fighting intentions.

Exact figures for higher formations have little meaning, but XXX Corps numbered at least 100,000 troops, and Second British Army more than 800,000 in total.

Also on 10 September, the still-crippled Eisenhower flew out to Brussels with his deputy, Air Chief Marshal Sir Arthur Tedder, to meet Montgomery at last. This highly charged meeting produced another change of plan. In return for the promise of more supplies from Eisenhower, Montgomery would delay his drive northwards into Holland in order to use the whole of Second British Army and First Allied Airborne Army together. The plan was codenamed *Market Garden*, and if it succeeded Montgomery hoped to use it to force

Eisenhower into accepting the 'single thrust' north. During September, Lieutenant General Brereton increased First Allied Airborne Army's staff from 323 officers and men to 1,385. Its air component was about 1,300 C-47 Dakota aircraft, and 250 Albemarles, Halifaxes and Stirlings of the RAF, together with about 2,000 gliders. Transport pilots were regarded as non-combatants by the USAAF and generally ranked well below fighter and bomber crews. Unlike the Americans, British glider pilots and pathfinders were trained to fight as infantry in their own units once on the ground.

The ground element of First Allied Airborne Army was about 35,000 combat troops who would fly into action, plus a 'seaborne tail' to follow later. US XVIII Airborne Corps Headquarters under Lieutenant General Matthew Ridgway was complete by September, but

CAVES de MAESTR

Lieutenant General Browning was still busy turning his British Airborne Forces administrative headquarters into British I Airborne Corps Headquarters. In particular, Browning's signals section was only created on 2 September, and he had no direct liaison with 2nd Tactical Air Force or other Allied air forces. Attempts very late in the planning of Operation *Market Garden* to provide air liaison officers resulted in failure. Like Horrocks at XXX Corps, Browning also had no Dutch liaison officer at his headquarters; however, all the airborne divisions had Dutch liaison officers for *Market Garden*. The 82nd US Airborne Division and 101st US Airborne Division each had three regiments (each three battalions strong) of parachute infantry, who were all volunteers, and one of air-landing infantry in gliders, who were not. Each division had 36 field guns, twice as many as a British airborne division. All these troops were specially trained and of the highest quality, and both they and their commanders had recent battle experience. The two divisions were busy absorbing more than 10,000 replacements for casualties suffered in Normandy.

1st British Airborne Division consisted of two brigades of the Parachute Regiment, all volunteers from other units, and an air-landing brigade of infantry battalions, plus the attached 1st Polish Parachute Brigade under Major General Stanislav Sosabowski. Many of its battalions had considerable previous combat experience and, like the Americans, its troops were of the highest quality. But it had never fought before as a division, nor under its current commander, Major General R. E. 'Roy' Urquhart. Waiting in reserve was 52nd (Lowland) Division, a British infantry division organized to be airportable in C-47 Dakotas once airfields were provided for it, together with two small specialist airfield engineer units, one British and one American.

The German forces

On 1 September OB West reported that it possessed the equivalent of nine infantry divisions and two weak armoured divisions north of the Ardennes, and was outnumbered ten to one in tanks, three to one in artillery, and absolutely in aircraft. The capture of Antwerp on 4 September provoked 'Mad Tuesday' next day, as German rear-area troops of Armed Forces Command Netherlands fell back in chaos throughout Holland. In these circumstances, any accurate count of German forces opposing *Market Garden* was impossible, but Allied estimates suggest no more than 15,000 troops and 250 tanks by 7 September. Model's great achievement was his organization of a coherent defence in just ten more days from this. Altogether 82,000 men, 46,000 vehicles and 530 guns of Fifteenth Army escaped across the Scheldt estuary by 23 September, and some were able to reinforce First Parachute Army by the time *Market Garden* started. Other troops came virtually untrained from reserve units, or were grouped together in improvised formations.

The basic German fighting unit for *Market Garden* was the Kampfgruppe, an improvised formation of no fixed size or strength. Some were smaller than battalions, but those that played an important role in *Market Garden* are best regarded as wrecked and reconstituted divisions, very weak in infantry but strong in artillery and assault guns, with a size and combat power roughly equal to an Allied brigade. Kampfgruppe 'Walther', defending against XXX Corps, changed its structure daily, including troops from the army, navy, Luftwaffe and Waffen-SS, and existed for less than a month (its commander's full identity has not survived). Kampfgruppe 'Chill' was formed by Generalleutnant Kurt Chill from the

Opposite
A Cromwell tank of 1st (Armoured) Battalion of the Coldstream Guards, the Guards Armoured Division, receiving a rapturous welcome in the centre of Brussels on 4 September. The leading troops of the division reached Brussels as darkness fell on the previous day. The rapid advance of XXX Corps from the Seine came as a complete surprise to Montgomery's critics, who thought of him as a slow-moving commander, and transformed the argument for the 'single thrust' strategy. (IWM – BU480)

remains of his own 85th Infantry Division together with 84th and 89th Infantry Divisions. Even ordinary German formations in *Market Garden* were rarely at full strength. Generalleutnant Walter Poppe's 59th Infantry Division was barely 1,000 men, 30 guns and 18 assault guns, while 6th Parachute Regiment was without one of its battalions. Commanding or coordinating attacks between these improvised formations was extremely difficult, and they varied greatly in quality.

After its retreat from the Falaise pocket, II SS Panzer Corps claimed on 12 September to have only 12 functioning tanks. By this date 9th SS Panzer Division had formed itself into SS-Kampfgruppe 'Hohenstauffen' under its senior surviving officer, Obersturmbannführer Walther Harzer. After sending troops to Kampfgruppe 'Walther', this consisted of a company of PzKpfw IV and PzKpfw V Panther tanks, two batteries of Jagdpanther IV assault guns, a reconnaissance battalion, a weak Panzergrenadier regiment, and an artillery battalion (12 guns). SS-Kampfgruppe 'Frundsberg', formed from 10th SS Panzer Division under Brigadeführer Heinz Harmel, had only a few PzKpfw IVs and Jagdpanthers, its reconnaissance battalion and Panzergrenadier regiment, but two artillery battalions. The total force was probably no more than 3,000 men with a high proportion of heavy infantry weapons and machine-guns. Like the Allied airborne troops, they were of the highest fighting quality.

Exhausted, routed or untrained, the Germans were indeed prepared to fight, although most were perfectly aware that the war was lost. Some, particularly in the Waffen-SS, had little wish to survive to face disgrace and possible war crimes trials. As the Allies pushed closer to German soil, most were ready to defend their homeland against an invader who demanded unconditional surrender, and whose attacks were visibly weakening.

The opposing plans

The Allied plan

Immediately after Montgomery's conference with Eisenhower, Dempsey ordered Browning to start planning I Airborne Corps' part in the battle. One later version of this meeting had Browning telling Montgomery that his troops could hold Arnhem bridge for four days, but that this might prove 'a bridge too far'. There is no evidence for this unlikely story, and planning was based on a general estimate of Second British Army reaching Arnhem in two to five days rather than to a fixed timetable.

Montgomery issued formal orders for Operation *Market Garden* on 12 September, after briefing Horrocks. The plan called for First Allied Airborne Army to assist Second British Army in a rapid advance from the Meuse–Escaut Canal all the way to Nunspeet on the Zuider Zee (IJsselmeer) almost 100 miles (160km) away, before turning east into Germany. The airborne troops would capture bridges over the major rivers and canals at three towns, each with a population in 1944 of about 90,000: Eindhoven, about 13 miles (20km) from the start line, Nijmegen 53 miles (85km) away, and Arnhem 64 miles (100km) away.

The tree-lined double track road along which XXX Corps was to advance ran through countryside that was almost entirely flat, partly of sandy soil and partly *polder* or drained bogland, broken by orchards, copses, small streams and ditches, all making opposed cross-country movement very difficult for vehicles. North of the line from 's Hertogenbosch to

Nijmegen the ground was almost all *polder*, veined with hundreds of small drainage ditches. The drained *polder* between the River Waal north of Nijmegen and the Lower Rhine (or Lek), filled with orchards and laced with waterways, was known locally as the *Betuwe* or 'island', with roads running along causeways up to 3m above the surrounding fields. North of the Lower Rhine at Arnhem the soil was sandy heathland, rising away north of the town past Apeldoorn to the Veluwe heights, at 100m the highest ground in Holland. Browning returned to I Airborne Corps Headquarters at Moor Park near London after his meeting with Dempsey, and notified First Allied Airborne Army at Ascot that an air plan was required. Brereton also produced this plan, Operation *Market*, by 12 September. For simplicity, as far as possible all paratroops were to be carried by USAAF aircraft and all gliders towed by RAF aircraft, regardless of the nationality of the troops. Despite predictions of up to 40 per cent aircraft losses, Brereton wanted to prove that a major air assault could be mounted in daylight (there was no moon in the target period, ruling out a night drop), and sided with his pilots by allowing only one major lift each day. As a result, the *Market* plan would take at least three days to fly the complete airborne divisions to their targets. The fourth day would be spent on resupply, and 52nd (Lowland) Division would be flown in north of Arnhem over the next two days. In order to prevent confusion over the target, Brereton also ruled that while his flights from England were in the air, 2nd Tactical Air Force must remain grounded rather than flying into the same airspace. Allied meteorologists predicted at least two days of clear weather starting on Sunday 17 September, which became 'D-Day' for the battle.

Brereton agreed that Browning's I Airborne Corps would command all three divisions of First Allied Airborne Army, with XVIII Airborne Corps relegated to an administrative role. Browning's plan was for each of the first wave to land as a formed body in open country about 6 miles (10km) from its main objective, and then advance to capture it. If everything worked, each of the three complete divisions would finish after three days, holding an all-round perimeter of at least 25 miles (40km) while the ground forces arrived.

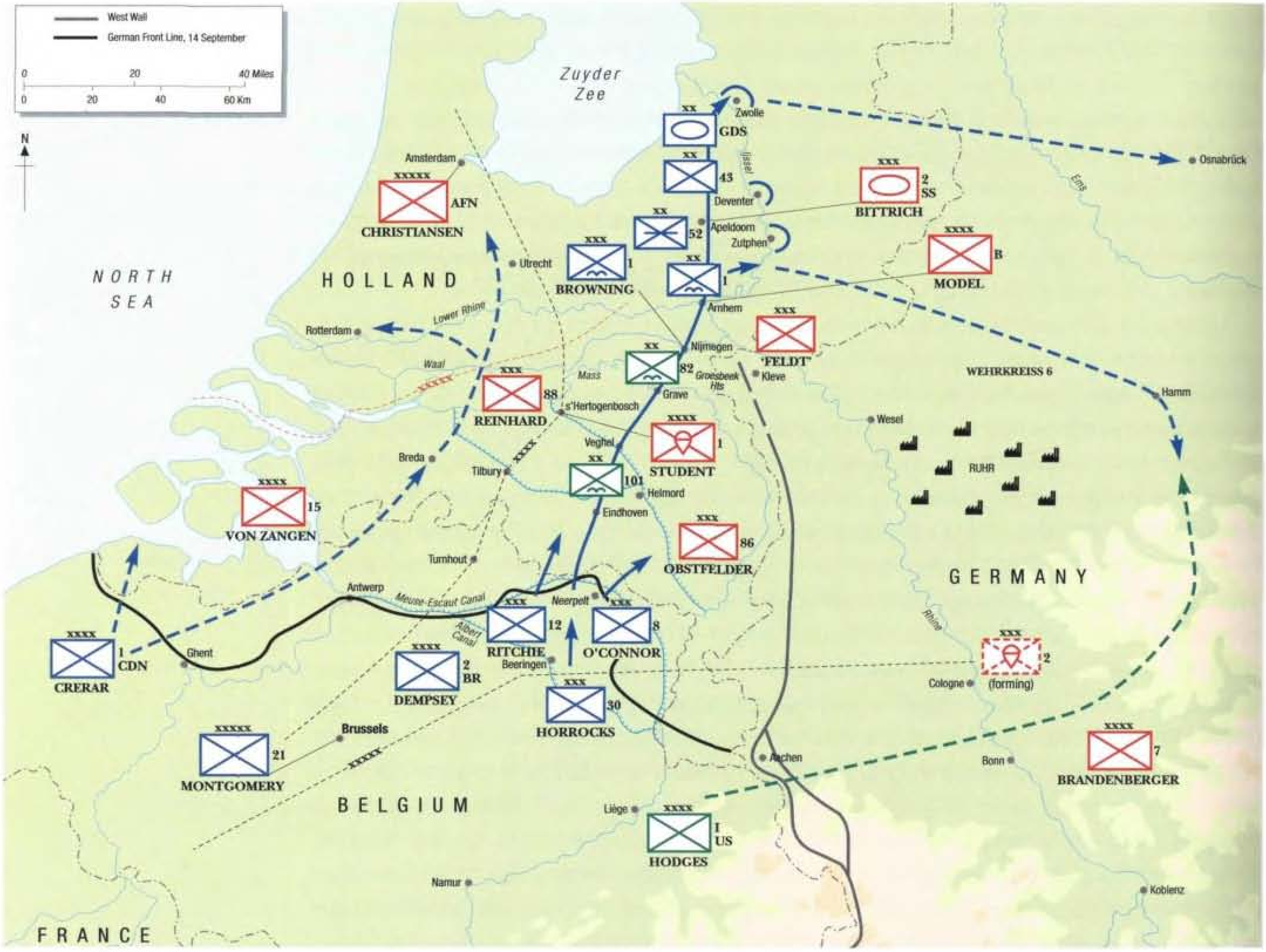
These distances and timescales only made sense if the German troops were not in fact going to fight. Although handicapped by poor coordination between SHAEF, 21st Army Group and First Allied Airborne Army, the Allied picture of German forces in the *Market Garden* area was reasonably clear. Browning's plan estimated the Germans at Arnhem as one broken Panzer division, or the equivalent of 3,000 infantry with a few tanks, which was exactly right. Allied intelligence had tracked II SS Panzer Corps Headquarters back from France to the Eindhoven–Arnhem area before losing it on 4 September, and had identified First Parachute Army Headquarters near 's Hertogenbosch and Army Group B near Arnhem itself by 16 September. The only significant Allied error was a SHAEF belief that II SS Panzer Corps might have retreated to the Kleve area, east of Nijmegen, rather than north.

In Browning's plan, 101st Airborne Division under Major General Maxwell Taylor was to drop north of Eindhoven, to capture the bridges over the River Aa and the larger Willems Canal (30m wide) at Veghel, over the minor River Dommel at St Oedenrode, and over the Wilhelmina Canal (35m wide) at Son, and then go on to capture Eindhoven by nightfall. Originally, Browning had wanted Taylor to secure the road from Eindhoven to Grave, a perimeter of 40 miles (65km). Taylor protested, and Dempsey overruled Browning, allowing 101st Airborne to halt at Veghel and leave a gap of about 13 miles (20km) in the Allied deployment. Even so, Taylor planned to take all three of his parachute infantry regiments on the first day, believing that artillery support would soon arrive from XXX Corps.

Brigadier General James Gavin, Ridgway's successor commanding 82nd Airborne Division, also believed that Browning had set him too large a task, but chose not to protest. Because of the expected threat from the Kleve region, Browning made Gavin's first priority the capture of the Groesbeek heights, an area of wooded hills about 100m high and 8 miles (12km) long to the east of Nijmegen, followed by the bridges over the River Maas (Meuse) at Grave (250m wide) and over the Maas–Waal Canal (60m wide). Only then was 82nd Airborne to try for the road bridge over the Waal (300m wide) in the centre of Nijmegen. Gavin took a mixed force of infantry and artillery on his first lift, realizing that he might have to fight alone for some time.

The landing zones for 1st British Airborne Division under Major General Urquhart were on the heathland west of Arnhem. But Browning specified that Urquhart's main objective was to be the road bridge over the Lower Rhine (100m wide) in the town centre, together with the railway bridge and a nearby pontoon bridge (discovered late on 16 September to have been dismantled by the Germans). Urquhart's troops, joined by 1st Polish Parachute Brigade, would then secure the high ground just north of Arnhem. Urquhart decided to lead with his air-landing troops, and take half his artillery and anti-tank guns on the first

Market Garden, *the plan, 17 September 1944.*


West Wall
German Front Line, 14 September
0 20 40 Miles
0 20 40 60 Km
N
Zuyder Zee
NORTH SEA
HOLLAND
GERMANY
BELGIUM
FRANCE
Zwolle
GDS
43
Ijssel
Deventer
Apeldoorn
Zutphen
52
1
Arnhem
2 SS
BITTRICH
B
MODEL
Osnabrück
Ems
Amsterdam
AFN
CHRISTIANSEN
Utrecht
1
BROWNING
Lower Rhine
Rotterdam
Waal
Maas
88
REINHARD
s'Hertogenbosch
Nijmegen
82
Groesbeek Hts
Grave
'FELDT'
Kleve
WEHRKREISS 6
Hamm
Wesel
RUHR
Veghel
1
STUDENT
Breda
Tilbury
101
Helmond
Eindhoven
15
VON ZANGEN
86
OBSTFELDER
Turnhout
Antwerp
Meuse-Escaut Canal
Neerpelt
Albert Canal
12
RITCHIE
8
O'CONNOR
Beeringen
1 CDN
CRERAR
Ghent
2 BR
DEMPSEY
30
HORROCKS
Rhine
2
(forming)
Cologne
21
MONTGOMERY
Brussels
Aachen
Bonn
7
BRANDENBERGER
Liège
I US
HODGES
Namur
Koblenz

lift. Suggestions that a small party of paratroops or glider troops could land directly on Arnhem bridge from the south came too late to change the plan.

On 16 September at Leopoldsburg (Bourg Leopold) about 13 miles (20km) south of Joe's Bridge, Horrocks briefed XXX Corps' senior officers on *Garden*, the ground plan. The Guards Armoured Division would lead XXX Corps' drive northward, codenamed the 'Club Route', aided by flank attacks from XII Corps on the left and VIII Corps (which had just begun to move from the Seine) on the right. As XXX Corps linked up with each airborne division it would take them under command from I Airborne Corps, handing off its troops further south to VIII Corps as it did so.

If the main bridges at Grave, Nijmegen or Arnhem were destroyed, the Guards Armoured would secure the river bank and 43rd (Wessex) Division following would mount an assault crossing. Both divisions were issued rations for four days and fuel for 250 miles (400km). Horrocks' main concern was breaking through the German defenders between Joe's Bridge and Valkenswaard, believed to be six battalions and 20 armoured vehicles. In fact Kampfgruppe 'Walther' had ten weak battalions (including 6th Luftwaffe Penal Battalion in tropical uniforms) and ten assault guns defending the bridgehead. Once this German 'crust' was broken, Horrocks expected easy going.

The German plan

Strictly, there was no German plan for *Market Garden*. Some form of Allied advance from the Meuse–Escaut Canal was expected, but German tactical intelligence was so bad that Kampfgruppe 'Walther' believed that it was facing Canadians, while during the battle SS-Kampfgruppe 'Frundsberg' identified the Guards Armoured Division as Americans.

At the highest level, German defensive plans were based on two assessments of Allied intentions. One threat was an amphibious landing by the (completely fictitious) Fourth British Army on the Dutch coast to cut off the remaining troops of Fifteenth Army. The other was a drive north-east towards Wesel by 21st Army Group as part of a pincer move to encircle the Ruhr. The Germans expected landings by First Allied Airborne Army to support either of these operations, and Generalfeldmarschall Model deployed the meagre forces of Student's First Parachute Army in central Holland to cover them both, exactly in the path of *Market Garden*. Model's personal headquarters was the Hartenstein Hotel in Oosterbeek, just east of 1st British Airborne's planned landing sites.

The bridge over the River Maas (Meuse) at Grave, with nine spans measuring 600m in length across a river 250m wide, was a substantial objective for 82nd Airborne Division. Its ominous name (usually pronounced to rhyme with 'Marv') led to some late attempts on the part of American staff officers to call it 'Gravey bridge'. This picture was taken on 27 September at the end of the battle. (IWM – B10347)

II SS Panzer Corps was not part of Model's defence, coming under Armed Forces Command Netherlands while it rested. Obergruppenführer Bittrich's own headquarters was at Doetinchem, 15 miles (25km) east of Arnhem, with his troops spread out between Arnhem and Deventer. On 12 September SS-Kampfgruppe 'Hohenstauffen' was ordered to start entraining for Siegen near Koblenz in Germany, where it would be refitted. The last of its vehicles were due to leave on 17 September, after which SS-Kampfgruppe 'Frundsberg' was to move to Aachen to refit. On 16 September Bittrich sent Brigadeführer Harmel by car to SS Headquarters in Berlin to plead in person for reinforcements, while Obersturmbahnführer Harzer continued to train his troops. The Allied landings next day would come as a complete surprise.

The air armada, 16 to 17 September

What was to become the battle of Arnhem began an hour before midnight on Saturday 16 September (British Summer Time, equal to GMT plus one hour but an hour behind local time in Holland) as 200 Lancasters and 23 Mosquitos of RAF Bomber Command dropped 890 tons of bombs on four German fighter airfields in northern Holland, including one for Me 262 jet fighters. This was the start of Brereton's plan to deliver the ground troops safely to the target by suppressing the German defences, estimated as including 112 light and 44 heavy anti-aircraft guns. Over the next 24 hours, 1,395 bomber sorties and 1,240 fighter sorties were flown in support of Operation *Market Garden*.

The bombing continued at 08.00hrs next day as 822 B-17 Flying Fortresses of 8th Air Force with 161 P-51 Mustangs in escort bombed all 117 identified German anti-aircraft positions along the *Market Garden* route, together with airfields at Eindhoven, Deelen and Ede. These were backed up by 54 Lancasters and five Mosquitos of Bomber Command, while another 85 Lancasters and 15 Mosquitos attacked the anti-aircraft positions on Walcheren Island. Two Flying Fortresses, two Lancasters and three Mosquitos were lost. Such was Allied air superiority that these attacks scarcely registered as unusual with the Germans. To coincide with Operation *Market Garden*, the Dutch Government in exile in London called for a general strike of transport workers throughout the Netherlands.

Sunday 17 September, D-Day for *Market Garden*, dawned as a beautiful late summer day, slightly cloudy with good visibility. In England, the airborne troops started to board their aircraft. The slower glider tugs, which cruised at 120mph, took off first at 09.30hrs, followed by the C-47 Dakota paratroop carrier aircraft at 140mph. The pathfinders, who would arrive first, took off at 10.25hrs. Crossing north-east of London, the sky train resolved itself into two streams, with 101st Airborne Division on the southern route into Holland, and both 82nd Airborne Division and 1st British Airborne Division on the northern route. I Airborne Corps Headquarters took off in gliders behind 82nd Airborne, including Browning's personal chef and wine cellar.

Before boarding his own Horsa glider, Urquhart told his chief staff officer, Lieutenant Colonel Charles Mackenzie, that in the unlikely event of both himself and Brigadier Gerald Lathbury, commanding 1st Parachute Brigade and 1st British Airborne's senior brigadier, being killed or captured, command of the division should pass to Brigadier P. H. W. 'Pip' Hicks, commanding 1st Airlanding Brigade and flying in that day, rather than to Brigadier

J. W. 'Shan' Hackett of 4th Parachute Brigade, who was senior to Hicks but not due to arrive until 18 September. Urquhart preferred the elderly and solid Hicks to Hackett, a 33-year-old cavalryman with a background in special forces.

By 11.35hrs the last aircraft had left the ground. The two columns of the sky train each stretched for 94 miles (150km) in length and 3 miles (5km) in breadth. On the southern route, 101st Airborne was carried by 424 Dakotas and 70 glider/tug combinations. On the northern route, 82nd Airborne travelled in 482 Dakotas and 50 glider/tug combinations, followed by the 38 glider/tugs (enough for an infantry battalion) of I Airborne Corps Headquarters. 1st British Airborne led as planned with 1st Airlanding Brigade and its artillery and divisional troops in 358 glider/tugs, with 1st Parachute Brigade following in 145 Dakotas. The total was 1,051 troop carrier aircraft and 516 glider/tug combinations, or 2,083 aircraft in all, flying at an average height of 1,500ft (500m). Escort on the northern route came from 371 Spitfires, Tempests and Mosquitos of Fighter Command, with 548 P-47 Thunderbolts, P-38 Lightnings and P-51 Mustangs of 8th Air Force on the southern route. Average flight time was between 90 and 150 minutes to target.

At about 12.00hrs local time, all 117 German anti-aircraft positions along the *Market Garden* route were bombed and strafed once again by 212 Thunderbolts of 9th Air Force, while 50 Mosquitos, 48 Mitchells and 24 Bostons (the RAF version of the A-20 Havoc) of RAF 2 Group bombed German barracks and airfields at Nijmegen, Deelen, Ede and Kleve. Allied pilots reported German anti-aircraft crews abandoning their positions before the aircraft attacked. At 12.40hrs, 12 RAF Stirlings dropped the British pathfinders of 21st Independent Parachute Company to the west of Arnhem. At the same time, four USAAF Dakotas released the pathfinders of 101st Airborne north of Eindhoven, and two more put the pathfinders of 82nd Airborne down near Grave bridge. The main drop of 82nd Airborne on to the Groesbeek heights would go in without pathfinders to achieve surprise, directly on top of the anti-aircraft batteries.

The C-47 Dakotas of the skytrain turn for home as the last troops of 1st Parachute Brigade land on Drop Zone 'X' near Wolfheze, alongside Horsa gliders that have already been unloaded and abandoned. Note in the background the woods which covered part of the heathland forming 1st British Airborne Division's landing zone. (IWM – BU1163)

ALLIED AIR TRANSPORT

AIRCRAFT	CRUISING/TOWING SPEED (MPH)	RANGE (MILES)	PAYLOAD TROOPS	PAYLOAD SUPPLIES/ EQUIPMENT (LB)
British				
ALBEMARLE	120	1,350	10	4,000
HALIFAX	130	3,000	10	6,000
STIRLING	120	3,000	12*	6,000
American				
C-47 SKYTRAIN (British name DAKOTA)	140	1,500	20*	6,000

All these aircraft, normally unarmed, were capable of towing one glider at maximum range, or two at shorter ranges, or of carrying the payload shown. A 6,000lb supply load is the equivalent of two large pieces of equipment, e.g. a jeep, trailer or small artillery piece.

**For parachute drops only. For air transport the C-47 could carry up to 28 troops, and the Stirling up to 40 troops.*

GLIDERS	MAX TOWING SPEED (MPH)	STALLING SPEED (MPH)	PAYLOAD TROOPS	PAYLOAD SUPPLIES/ EQUIPMENT (LB)
British				
HORSA	160	60	28	6.900
HAMILCAR*	150	65	–	17,000
American				
CG-4A WACO (British name HADRIAN)	125	38	15	3,750

**The Hamilcar could only be towed by four-engined aircraft such as the Halifax and Stirling. It was designed as a large cargo carrier only, and carried larger-calibre artillery pieces or bulldozers. All the gliders had a crew of two pilots.*

ALLIED AIRLIFT REQUIREMENTS

FORMATION	C-47 DAKOTAS (CARRIER)	GLIDERS/TUGS (ALL KINDS)
Parachute battalion (British/American/Polish)	35	–
Parachute brigade/regiment (British/American/Polish)	120–140	20–40
Airlanding battalion	–	60–70
Divisional artillery* (British)	–	160
Field artillery battalion* (American)	–	95
Parachute artillery battalion* (American)	60	
Airborne division	400	700
Airportable division	2,000 (transport only)	

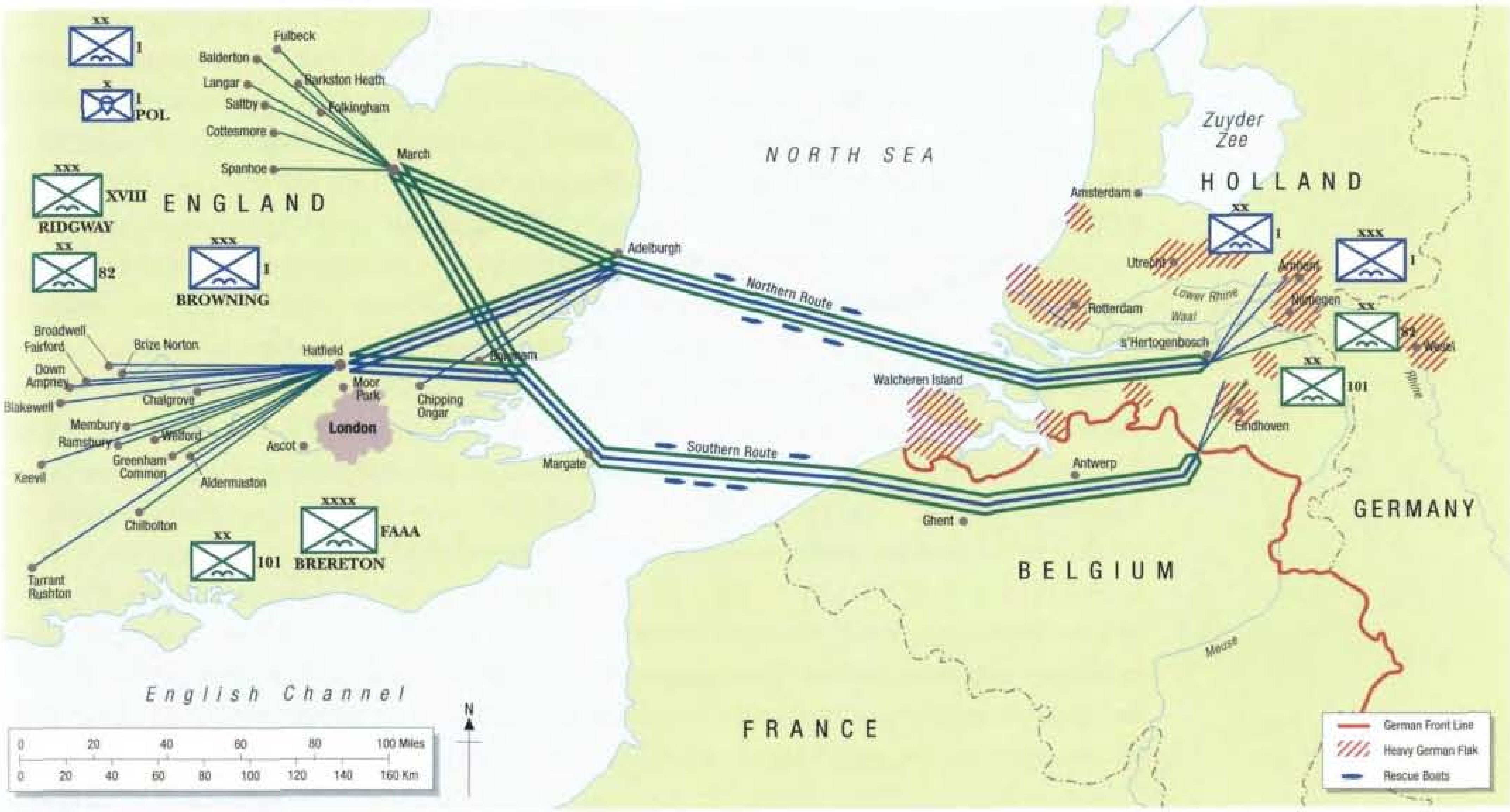
These are approximate figures only.

**A British light artillery regiment and anti-tank regiment was 12 75mm guns, six 105mm guns, 12 6pdr AT guns, and six 17pdr AT guns. An American field artillery battalion was 12 75mm guns or parachute artillery battalion.*

Meanwhile, the two great columns of transport aircraft had crossed into enemy airspace. The Dakotas, without armour, guns or self-sealing fuel tanks, slowed to 110mph and descended to 500ft (160m) for the drop. The average time over the German anti-aircraft positions was about 40 minutes. On the southern route, Brereton and Ridgway each watched from a Flying Fortress with the 101st Airborne. Of 75 German fighters scrambled, about 30 reached the skytrain, but were seen off by its escort. The only dogfight was over Wesel, where seven out of 15 Me 109s were lost for one American fighter. The anti-aircraft defences were least damaged over Eindhoven, where 101st Airborne lost 33 Dakotas and Brereton's own aircraft was holed. Some gliders failed to complete the trip, or broke up in mid-air. In total 68 Allied aircraft and 71 gliders were lost from all causes in the flight, including two RAF and 18 USAAF fighters.

At 13.00hrs the first gliders of 1st Airlanding Brigade skidded to earth west of Arnhem, followed by Urquhart's artillery and divisional troops. Of 319 gliders, 35 failed to arrive, of which 21 landed in England and flew in to Holland next day. The only serious loss was two gliders, each carrying a 17pdr anti-tank gun. Meanwhile, Major General Taylor jumped with 6,769 men of 101st Airborne north of Eindhoven. 501st Parachute Infantry Regiment landed correctly on its drop zone south of Veghel, except for 1/501st which was dropped by a fortunate error at Heeswijk, 3 miles (5km) to the north-west on the wrong side of the Willems Canal and the River Aa. 502nd Parachute Infantry and 506th Parachute Infantry landed together with 101st Airborne Headquarters just north of the Sonsche forest. At the same time, 6,527 men of 82nd Airborne dropped successfully for the loss of two Dakotas south of Nijmegen, Brigadier General Gavin jumping from the lead aircraft as was his custom. Of these, 2,016 men of 504th Parachute Infantry landed at Grave, including a company of 2/504th dropped deliberately west of the bridge, while 505th Parachute

Operation Market*: the Allied fly-in, 17 September 1944.*


xx
1
x
1
POL
xxx
XVIII
RIDGWAY
xx
82
xxx
1
BROWNING
ENGLAND
Fulbeck
Balderton
Barkston Heath
Langar
Saltby
Folkingham
Cottesmore
Spanhoe
March
Adelburgh
Broadwell
Fairford
Brize Norton
Down Ampney
Blakewell
Chalgrove
Hatfield
Moor Park
Chipping Ongar
Membury
Welford
Ramsbury
Greenham Common
Keevil
Aldermaston
Ascot
London
Margate
Chilbolton
Tarrant Rushton
xxxx
FAAA
xx
101
BRERETON
English Channel
0 20 40 60 80 100 Miles
0 20 40 60 80 100 120 140 160 Km
N
NORTH SEA
Northern Route
Southern Route
Zuyder Zee
HOLLAND
Amsterdam
Utrecht
Rotterdam
Lower Rhine
Waal
xx
1
xxx
1
Arnhem
Nijmegen
xx
82
Wesel
s'Hertogenbosch
Walcheren Island
xx
101
Eindhoven
Rhine
Antwerp
Ghent
GERMANY
BELGIUM
Meuse
FRANCE
German Front Line
Heavy German Flak
Rescue Boats

Infantry and 508th Parachute Infantry dropped on to the Groesbeek heights just north and south of the village. The drop included the first ever parachute deployment of artillery into battle by the 544 men of 376th Parachute Artillery Battalion, jumping with their 12 disassembled 75mm howitzers from 48 Dakotas. At about 13.30hrs, Browning's I Airborne Corps Headquarters landed near Groesbeek village, without two of its gliders. Finally at 13.53hrs, 1st Parachute Brigade jumped west of Arnhem to complete the British landing. By 14.08hrs, some 20,000 combat troops, 511 vehicles, 330 artillery pieces and 590 tons of equipment had been safely landed.

As the skytrain climbed to 3,000ft (1,000m) for the return journey, Brereton flew back to IX Troop Carrier Command Headquarters at Eastcote (near Moor Park) to oversee the preparations for the second wave next day together with Tedder and Ridgway. Brereton was delighted to have proved that heavy enemy anti-aircraft defences could be overcome to mount a major daylight airborne operation. The whole *Market* deployment from England was already fixed, and when the second wave flew out next day his role in the battle would effectively be over. There was no one in England to coordinate the land battle with the air plan, and no reserve.

The Allied attack, 17 September

At 14.00hrs, with fighter-bombers of RAF 83 Group waiting overhead, Lieutenant General Horrocks' XXX Corps opened its bombardment at Joe's Bridge with 11 field artillery regiments and six medium regiments, a total of 408 guns. After 35 minutes, the Irish Guards Group led off for the Guards Armoured Division along the Club Route up the Eindhoven road, with infantry from 231st Brigade of 50th (Northumbrian) Division keeping pace on either side of the road to widen the bridgehead. Despite Horrocks' fears, the breakthrough went well, as Kampfgruppe 'Walther' was overwhelmed by the weight of Allied firepower. But Major General Adair, commanding the Guards Armoured, stuck to orders and halted at Valkenswaard at 19.30hrs, having lost nine tanks. At the same time, XII Corps under Lieutenant General Ritchie attacked with 15th (Scottish) Division north from Aart and 53rd (Welsh) Division north from Lommel against Kampfgruppe 'Chill'. Attacking across country without the air support of the Guards, these troops made little progress. Nevertheless, the German defensive crust had been broken, and Field Marshal Montgomery reported to London that XXX Corps would be in Arnhem next day.

North of Eindhoven, 101st Airborne reached most of its objectives by 16.00hrs. 501st Parachute Infantry secured the rail and road bridges at Heeswijk and Veghel, and 502nd Parachute Infantry captured the St Oedenrode bridge against light opposition. But at Son, a handful of trainees from the Luftwaffe's Division 'Hermann Göring' blew the bridge over the Wilhelmina Canal as 506th Parachute Infantry arrived, and a weak push by a company of 2/502nd Parachute Infantry towards an alternative bridge south of Best was checked by part of Parachute Battalion 'Jungwirth' (of Kampfgruppe 'Chill'), producing a stalemate. Until bridging equipment from XXX Corps arrived at Son, there was no way forward. Taylor sent foot patrols south towards Eindhoven, but like Adair he made no effort to enter the town.

In response, General Student, watching the landings from his personal headquarters at Vught, redirected 59th Infantry Division from Fifteenth Army, moving eastward by train

Soldiers of 231st Infantry Brigade, 50th (Northumbrian) Division, moving up in support of the Guards Armoured Division along the road to Eindhoven from Joe's Bridge on Sunday 17 September. Note the abandoned German 88mm flak gun by the roadside. Following their retreat, the Germans often lacked the heavy cross-country movers to position these guns properly, and dropped them in exposed positions along the length of the road. This made them easier to overcome, but reinforced the British belief that the Germans had mined the roadside verges, which they had been able to do in only a few places. (IWM – B9982)

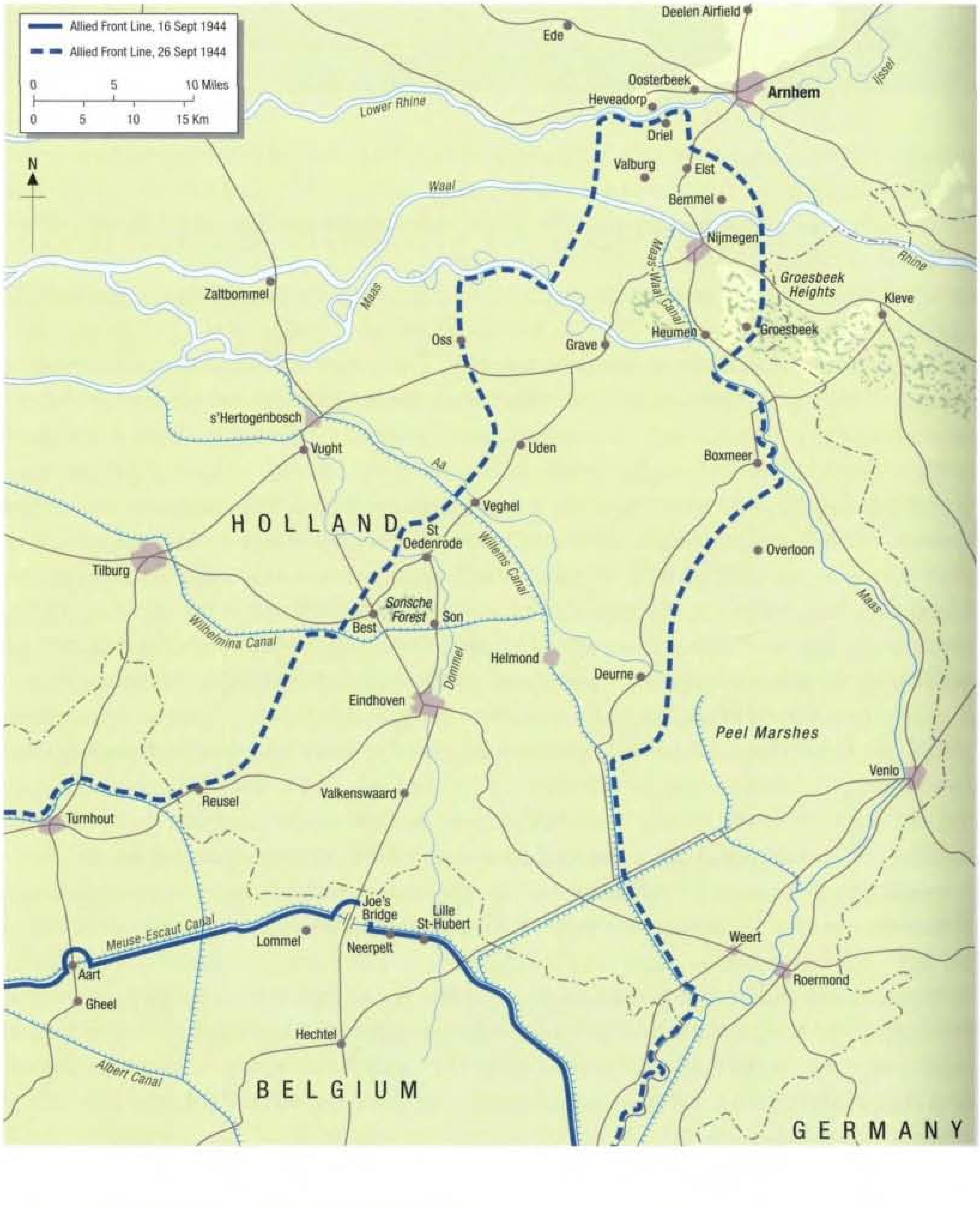
through Tilburg, to reinforce LXXXVIII Corps at Best. Later that afternoon Student received what he subsequently described as a complete set of plans for *Market Garden* from a crashed Allied glider, almost certainly missing from Browning's headquarters. General Hans Reinhard of LXXXVIII Corps ordered Kampfgruppe 'Chill' to hold to the last man, while LXXXVII Corps under General Otto Sponheimer moved 719th Coastal Division eastward to Turnhout in support.

Further north still, 82nd Airborne's attempt to capture its bridges also met with mixed fortune. 505th and 508th Parachute Infantry established themselves on either side of Groesbeek village, while 504th Parachute Infantry secured Grave bridge. Two of the three bridges over the Maas–Waal Canal were blown by their German defenders before more troops from 504th and 505th Parachute Infantry arrived on foot. This closed the direct road from Grave to Nijmegen, leaving only the bridge nearest Heumen in American hands. Not until after dark was a single company of 1/508th Parachute Infantry sent into Nijmegen to investigate the road bridge across the River Waal, with the aid of some PAN (Dutch resistance) workers. This was stopped well before the bridge by Kampfgruppe 'Henke', an improvised battalion of soldiers, airmen and railway guards defending Nijmegen.

As the first reports of the landing at Wolfheze came in at 13.00hrs, Generalfeldmarschall Model quickly abandoned the Hartenstein Hotel, moving Army Group B Headquarters from Oosterbeek to Terborg, some 30 miles (50km) to the east. At 13.30hrs Obergruppenführer Bittrich at Doetinchem, calling for Brigadeführer Harmel's immediate return from Berlin, ordered his men on to full alert, and SS-Kampfgruppe 'Hohenstauffen' started unloading its remaining vehicles from the trains. At 15.00hrs Model arrived at Doetinchem and assumed direct command of II SS Panzer Corps from Armed Forces Command Netherlands, much to Bittrich's annoyance.

Nevertheless, Model and Bittrich agreed that the key to the battle was not Arnhem, but Nijmegen road bridge. If the Allied drive could be stopped on the Waal, any success farther north became irrelevant. Bittrich wanted to destroy both Arnhem and Nijmegen bridges at once, but Model refused, more aware of Hitler's suspicions and claiming that he needed the bridges for a counter-attack.

At Rastenburg, Hitler was stunned and shaken by the Allied airborne assault. In response to Model's signals he agreed to give the defeat of *Market Garden* absolute priority, ranking even above the defence of Germany. Over 300 fighters were promised for next day, virtually the entire Luftwaffe front-line strength in western Europe. Model also obtained the troops in training from Wehrkreiss VI, the military district of Germany immediately east of the Netherlands, together with all those in transit or on leave in the Wesel area, at least 3,000 men formed into improvised march battalions. General Friedrich Christansen in Amsterdam also promised reinforcements from Armed Forces Command Netherlands under his chief training officer, Generalleutnant Hans von Tettau. More importantly, the armour, artillery, ammunition and replacement troops that II SS Panzer Corps badly needed would start to arrive within 48 hours.

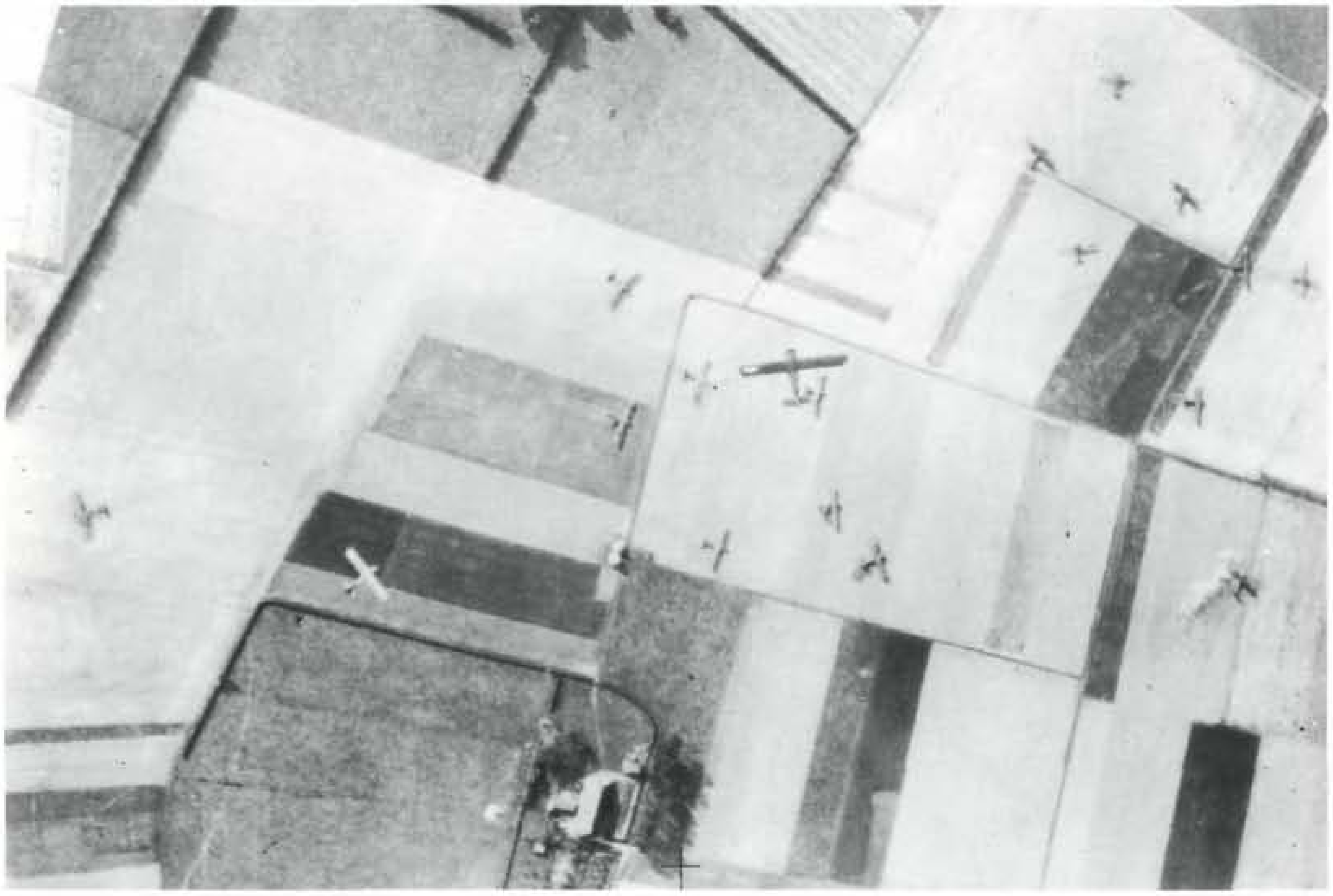

Allied Front Line, 16 Sept 1944
Allied Front Line, 26 Sept 1944
0 5 10 Miles
0 5 10 15 Km
N
Deelen Airfield
Ede
Oosterbeek
Heveadorp
Arnhem
Ijssel
Lower Rhine
Driel
Valburg
Elst
Waal
Bemmel
Nijmegen
Rhine
Maas-Waal Canal
Groesbeek Heights
Kleve
Zaltbommel
Maas
Heumen
Groesbeek
Oss
Grave
s'Hertogenbosch
Vught
Uden
Aa
Boxmeer
Veghel
HOLLAND
St Oedenrode
Willems Canal
Overloon
Tilburg
Sonsche Forest
Best
Son
Wilhelmina Canal
Helmond
Dommel
Deurne
Eindhoven
Peel Marshes
Venlo
Reusel
Valkenswaard
Turnhout
Joe's Bridge
Lille St-Hubert
Meuse-Escaut Canal
Lommel
Neerpelt
Weert
Roermond
Aart
Gheel
Hechtel
Albert Canal
BELGIUM
GERMANY

Market Garden*: area of operations, 16–26 September 1944.*

The battle of Arnhem was exactly the kind of military improvisation at which Model excelled, and three hours after the Allied landings his defence plan was ready. General Student was to handle operations near Eindhoven, sending Kampfgruppe 'Chill' against XII Corps and XXX Corps, and 59th Infantry Division together with 107th Panzer Brigade (promised by Generalfeldmarschall Rundstedt at OB West) against 101st Airborne. The forces from Wehrkreiss VI under General Kurt Feldt were to recapture the Groesbeek heights from 82nd Airborne, with II Parachute Corps being rushed from Cologne to assist. SS-Kampfgruppe 'Frundsberg' was to move across Arnhem bridge to Nijmegen that evening and prevent any Allied crossing, while SS-Kampfgruppe 'Hohenstauffen' held the British west of Arnhem. During the battle, Model visited Obersturmbahnführer Harzer's headquarters every day to ensure that reinforcements were getting through.

By 15.00hrs, while 1st Airlanding Brigade secured its defensive perimeter around the landing zones west of Arnhem, the British were already in action against 16th SS- Panzergrenadier Depot Battalion (440 strong) under Haupsturmführer Sepp Krafft, which had been training on the heath. The SS NCO Training School 'Arnhem' at Wolfheze also formed a scratch force, as did Kampfgruppe 'Weber' of Luftwaffe troops from Deelen. The 3rd Dutch SS Police Battalion was also on its way from the north. The first 47 prisoners the British took came from 27 different parent units.

At about 15.40hrs, 1st Parachute Brigade started to move towards Arnhem by three routes, 3rd Battalion of the Parachute Regiment down the main Oosterbeek highway (the 'Tiger' route) with the brigade headquarters, led by 28 jeeps of 1st Airborne Reconnaissance Squadron under Major C. F. H. 'Freddie' Gough along the line of the railway, 1st Battalion to the north ('Leopard') and 2nd Battalion to the south ('Lion'). Most of 1st British Airborne's radios were working, but as expected there were problems in maintaining contact, and divisional headquarters could not reach Gough or Lathbury, who were about



CG-4A Waco gliders of 101st Airborne Division circling and landing north of the Sonsche forest, Sunday 17 September. This picture gives a good idea of the flatness of the Dutch countryside on either side of the path of XXX Corps' advance. Note that one glider, far right, appears to have ploughed in on landing, breaking its left wing-tip and leaving a plume of disturbed earth. (IWM – MH2071)

Opposite
Humber armoured cars of 2nd Household Cavalry Regiment driving through the streets of Eindhoven, Monday 18 September. A composite unit made up from the Life Guards and the Royal Horse Guards, the Household were known in radio communication by their collective regimental nickname of the 'Stable Boys', and acted as the reconnaissance battalion for XXX Corps during the battle. (IWM – B10127A)

to come under heavy fire from Krafft's troops near Oosterbeek. The powerful Luftwaffe transmitter at Deelen, calling for help from all directions, added to the problem.

At about 16.00hrs a false rumour reached Urquhart that most of the gliders carrying Gough's reconnaissance force had failed to arrive. Leaving his headquarters, Urquhart set out to find Gough and check on his division, driving off in his jeep down the 'Lion' route. Reaching part of 2nd Battalion, he failed to find its commander, Lieutenant Colonel John Frost, and swung northwards, meeting Lathbury with 3rd Battalion but away from his own brigade headquarters.

The first part of the paratroops' advance had been almost a triumphal procession beside grateful Dutch civilians. Now, among the trees and buildings on the outskirts of Oosterbeek, they encountered increasing numbers of German snipers and mortar teams, and Urquhart's own jeep was hit. 1st Battalion to the north was having equal trouble as Obersturmbahnführer Harzer assembled his blocking force, SS-Kampfgruppe 'Spindler' (barely two battalions) which gradually absorbed Krafft's troops into a solid line by midnight, cutting off 1st Parachute Brigade from Arnhem bridge and the high ground. As darkness fell, Urquhart radioed to his headquarters that he and Lathbury were spending the night with 3rd Battalion.

Meanwhile, Major Gough had heard that he was wanted and, returning to divisional headquarters, found that Urquhart had gone. He set out again towards Arnhem. At about 19.00hrs one of Gough's patrols notified 1st British Airborne Headquarters of the existence of a ferry at Heveadorp, but with Urquhart elsewhere no action was taken to secure the ferry.

On the German side, at about 18.00hrs Generalmajor Kussin, the Arnhem Town Commandant who was responsible for the defence of its bridges, was killed by paratroops of 3rd Battalion at Wolfheze crossroads after driving to confer with Krafft. As Frost's 2nd Battalion approached the railway bridge at about 18.30hrs it was blown in their faces, and

Dutch children greet paratroopers of the US 82nd Airborne Division after they land near Nijmegen. (IWM – EA38132)

DRACK
AGFA
Bata
COIFFEUR

the pontoon bridge was found to be dismantled as expected. But at Arnhem road bridge itself the small guard of German pioneer troops had abandoned their posts, and the bridge was undefended. Approaching at dusk, the paratroops watched 30 vehicles of 9th SS Reconnaissance Battalion drive on to the bridge from the north, and keep going: the battalion was on loan to SS-Kampfgruppe 'Frundsberg', and its orders were to drive to Nijmegen. At 19.30hrs the first of Frost's men moved completely unopposed into position among the buildings at the northern end of the bridge. Within half an hour the first troops of the 'Frundsberg' heading for Nijmegen tried to cross the bridge from the north and found their way blocked.

Bittrich at once secured the southern end of the bridge with armoured cars of 10th SS Reconnaissance Battalion. Frost did not have enough troops to hold the entire bridge, and a speculative night attack with flame-throwers on a German pillbox at the northern end did little but set most of the structure alight. But before night fell, Frost notified divisional headquarters and Urquhart that his end of the bridge was secure.

During the night Major Gough reached the bridge with two of his jeeps, and other troops of 1st Parachute Brigade managed to get through to Frost before dawn. By morning his force was about 600 men, mostly from his own 2nd Battalion, including four 6pdr anti-tank guns plus mortars and anti-tank mines. More importantly, at 08.00hrs the headquarters of 1st Parachute Brigade arrived (without Lathbury), giving Frost radio contact with 1st British Airborne Headquarters and artillery support from one of the three troops (four guns each) of the division's 75mm howitzers.

The Allied failure, 18 September

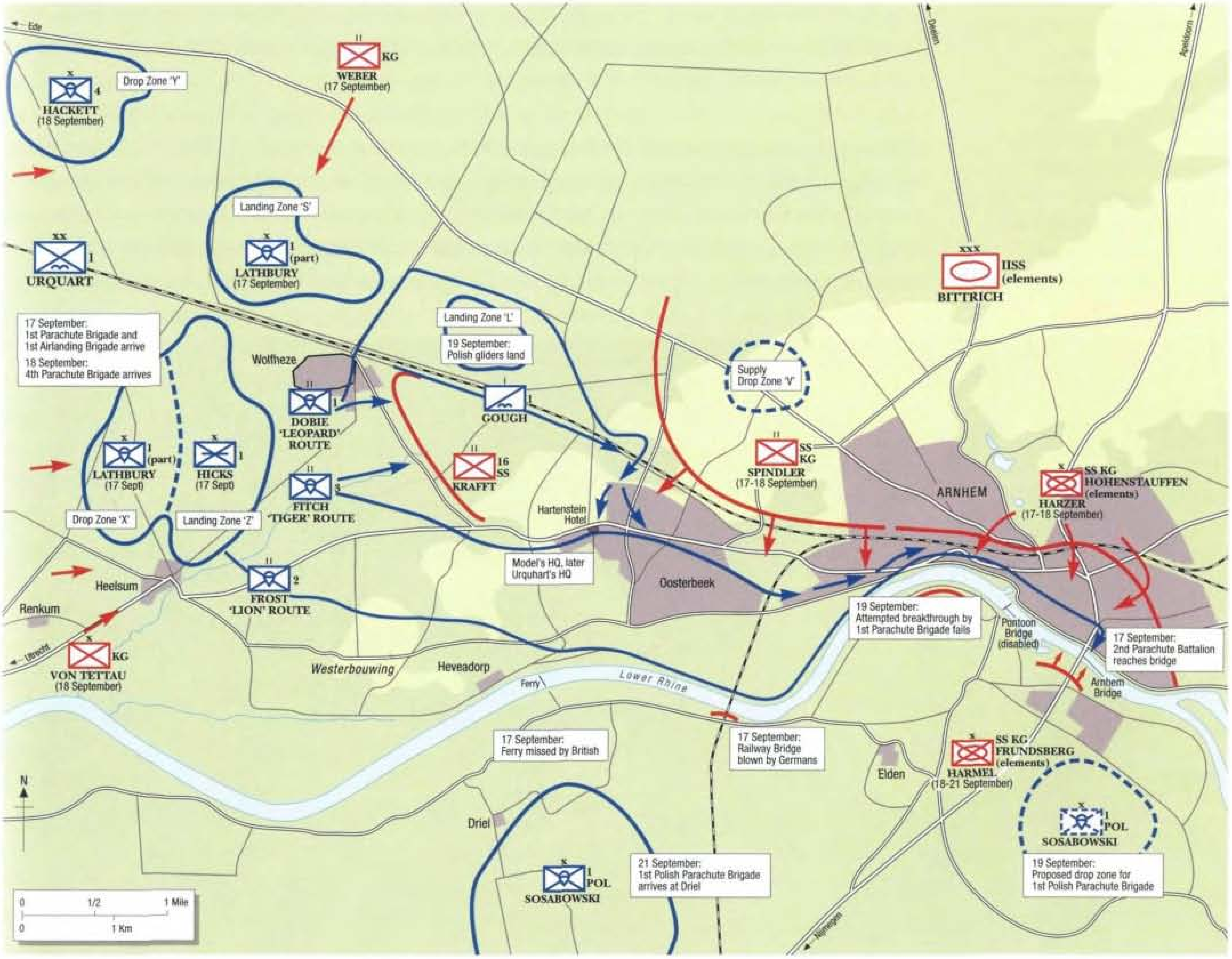
The Allied meteorologists were one day out in their predictions, and on Monday (D+1) the autumn weather closed down. Heavy fog in the morning was followed by heavy rain in the afternoon and evening. In England, the take-off of the second airborne wave, due for dawn at 06.00hrs, was delayed. The fog also grounded the Allied aircraft in Belgium and northern France for the morning. Lieutenant General Ridgway flew out to Brussels in an effort to join his troops but was unable to land because of the weather. Further north in Holland and western Germany the airfields cleared just as the Luftwaffe started its maximum effort. Together with Browning's failure to arrange RAF and USAAF liaison officers with his troops, and Brereton's stipulation that the aircraft in Belgium remain grounded while his own were flying, this meant that 82nd Airborne received only 97 close-support sorties from RAF 83 Group, and 1st British Airborne received none, compared with 190 Luftwaffe fighters committed to the area. German air attacks took place as far south as Joe's Bridge, which was narrowly missed by a fighter-bomber raid. *Market Garden*, a plan based on airpower, was the only battle of the entire campaign in North-West Europe fought with Allied air inferiority, a large part of it self-inflicted.

At 06.00hrs, with the armoured cars of the 2nd Household Cavalry Regiment reconnoitring ahead, the Guards Armoured advance resumed, leaving 231st Brigade to hold Valkenswaard. Halfway to Eindhoven the Grenadier Guards Group took over the lead, with the Welsh Guards Group opening up the second Heart Route axis towards Helmond. During the morning, 506th Parachute Infantry cleared Eindhoven of a single German company and secured the bridges over the River Dommel east of the town. By the evening, the Guards Armoured had passed around east of Eindhoven and reached the destroyed bridge at Son, where work on a Bailey bridge began. The Welsh Guards' attempt to strike out across country had bogged down against Kampfgruppe 'Walther' in the flat terrain, and Major General Adair ordered it to rejoin the main axis at Son.

During the day, German LXXXVI Corps arrived from the east under General Hans von Obstfelder with 176th Infantry Division (7,000 trainees and semi-invalids) and Division 'Erdmann' (3,000 recruits for the planned 7th Parachute Division), strengthening the German position between Weert and Helmond. Meanwhile, after a strong attempt by 2/502nd and 3/502nd Parachute Infantry to capture Best bridge, it was finally blown at 11.00hrs by 59th Infantry Division. The British advance now depended entirely on the speed at which the Bailey bridge at Son was completed.

With dawn at Nijmegen, Gavin ordered 1/508th and 3/508th Parachute Infantry to try again for the road bridge. Three times during the day the paratroops reported that the bridge was theirs, but each time the German defence held. Blocked at Arnhem bridge,

Arnhem: British 1st Airborne Division operations, 17–21 September 1944.


Ede
Drop Zone 'Y'
X
4
HACKETT
(18 September)
II
KG
WEBER
(17 September)
Landing Zone 'S'
X
1
(part)
LATHBURY
(17 September)
XX
1
URQUART
Landing Zone 'L'
Wolfheze
II
1
DOBIE
'LEOPARD' ROUTE
1
GOUGH
X
1
(part)
LATHBURY
(17 Sept)
X
1
HICKS
(17 Sept)
II
3
FITCH
'TIGER' ROUTE
II
16
SS
KRAFFT
Drop Zone 'X'
Landing Zone 'Z'
Heelsum
Renkum
II
2
FROST
'LION' ROUTE
Utrecht
X
KG
VON TETTAU
(18 September)
Westerbouwing
Heveadorp
Ferry
Lower Rhine
Hartenstein Hotel
Oosterbeek
Supply Drop Zone 'V'
II
SS
KG
SPINDLER
(17-18 September)
Arnhem
Dieren
Apeldoorn
XXX
IISS
(elements)
BITTRICH
ARNHEM
X
SS KG
HOHENSTAUFFEN
(elements)
HARZER
(17-18 September)
Pontoon Bridge (disabled)
Arnhem Bridge
X
SS KG
FRUNDSBERG
(elements)
HARMEL
(18-21 September)
Elden
X
1
POL
SOSABOWSKI
Driel
X
1
POL
SOSABOWSKI
Nijmegen
N
0
1/2
1 Mile
0
1 Km

17 September:
1st Parachute Brigade and
1st Airlanding Brigade arrive
18 September:
4th Parachute Brigade arrives

19 September:
Polish gliders land

Model's HQ, later
Urquhart's HQ

19 September:
Attempted breakthrough by
1st Parachute Brigade fails

17 September:
2nd Parachute Battalion
reaches bridge

17 September:
Ferry missed by British

17 September:
Railway Bridge
blown by Germans

21 September:
1st Polish Parachute Brigade
arrives at Driel

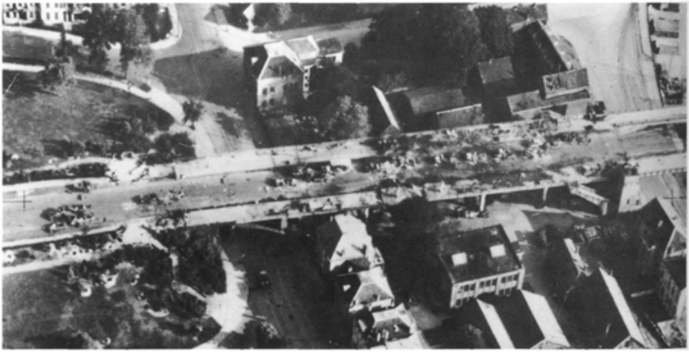
19 September:
Proposed drop zone for
1st Polish Parachute Brigade

SS-Kampfgruppe 'Frundsberg' began the slow process of ferrying troops and vehicles across the Pannerden Canal, the canalized stretch of the Lower Rhine east of Arnhem. The first troops reached Nijmegen on bicycles, followed by four PzKpfw IV tanks, the vanguard of SS-Kampfgruppe 'Reinhold'. Brigadeführer Harmel, who had driven flat-out from Berlin, set up headquarters next day at Doornenburg 6 miles (9km) north of Nijmegen to coordinate the defence.

Also at dawn, the first troops of Corps 'Feldt' from Wehrkreis VI, about 3,400 barely trained men in four groups under 406th Landesschützen Division, started to attack on the Groesbeek heights, finding gaps in the thin American line. During the day, the PAN warned Gavin of more Germans massing in the Reichswald. Taking this to heart, 82nd Airborne and Browning with them fought the rest of the battle for Nijmegen bridge looking over one shoulder, preparing to defend against an expected armoured drive by II SS Panzer Corps across the Groesbeek heights which never came.

At Arnhem, both sides attacked before dawn. Kampfgruppe 'von Tettau' (including 224th Panzer Company with French Renault tanks) moved against 1st Airlanding Brigade from Renkum to the west, gradually absorbing all other German forces west of Oosterbeek in a fire-fight that lasted most of the day. Meanwhile, 3rd Battalion of the Parachute Regiment resumed its advance towards Arnhem bridge against SS-Kampfgruppe 'Spindler', with Lathbury and Urquhart in attendance.

As 3rd Battalion's advance pushed to within about 1.2 miles (2km) of the bridge, the British and Germans became intermingled in confused street fighting. Urquhart's party was cut off, and shortly before noon Lathbury was wounded and had to be left in a nearby house. As the Germans closed in, Urquhart accompanied by two captains was forced to take refuge in a sympathetic householder's attic while enemy troops patrolled the streets below. With Urquhart and Lathbury both missing, Brigadier Hicks officially took over the division



The result of the attack by 9th SS Reconnaissance Battalion of the 'Hohenstauffen' across Arnhem bridge into Frost's position, taken by an RAF reconnaissance aircraft on Monday 18 September, looking east. The picture shows the raised section of the main road leading on to the bridge itself (to the right of the picture). Over 20 destroyed German half-tracks and reconnaissance vehicles can be seen. Haupsturmführer Viktor Grabner, commanding the battalion, who had received the Knight's Cross from Obersturmbahnführer Harzer at noon on the previous day, was killed in the attack. (IWM – MH2062) at 09.15hrs, sending 2nd Battalion of the South Staffordshire Regiment (two companies strong) to reinforce 1st Parachute Brigade's increasingly fragmented drive.

At Arnhem bridge itself, Frost was still in a strong position, with at least as many troops as SS-Kampfgruppe 'Knaust' of the 'Hohenstauffen', which attacked from the north. The Germans soon discovered that the airborne troops were a formidable enemy, and that infantry assaults achieved little against them. Artillery and armour were needed to blast Frost's men out of their houses, and two 100mm guns began the process just after dawn. At 09.30hrs about 22 vehicles of 9th SS Reconnaissance Battalion returned from Nijmegen and tried to charge across the bridge and into Frost's position, only to be destroyed by British mines, anti-tank guns and grenades. But Frost had rations only for 48 hours, and was forced to restrict ammunition during the day. Meanwhile, 1st Parachute Brigade was checked by SS-Kampfgruppe 'Spindler' still short of the bridge. Over the next two days the replacement tanks and guns demanded by Model started to arrive at Arnhem from all over Germany, including Flak Brigade 'von Swoboda' from Luftwaffe West equipped with 70 anti-aircraft guns (33x 88mm, 29x 20mm and 8x 37mm) in five battalions.

All this was unknown to Browning and his staff, who were rapidly discovering the difference between an administrative headquarters and an Army Corps command. There was endless trouble with radio communications, for which Browning later blamed his signals section. In fact the GHQ Liaison Regiment ('Phantom') unit with 1st British Airborne was in touch with London through its specialist radio equipment, as was a BBC reporting team with a VHS set (later in the battle, newspapers carrying their first reports were dropped to the troops at Arnhem), and the division had direct contact with Frost on Arnhem bridge. 1st British Airborne was also speaking to I Airborne Corps Rear Headquarters at Moor Park, which was in intermittent contact with Browning. The PAN, using a private telephone system belonging to the regional electricity company, also sent coded messages between Arnhem and Nijmegen warning 82nd Airborne that 1st British Airborne was in trouble, and the same telephone system reached south to 101st Airborne at Son. The failure was not principally one of communications, but of staffwork and experience at Browning's headquarters. Next morning I Airborne Corps asked Moor Park for copies of 1st British Airborne's signals, and that afternoon firm radio contact was established. But for the vital first two days of the battle, Browning was never in proper command.

At 10.00hrs in England, the glider/tug combinations of the delayed second airlift took off, followed by the paratroop carriers at 12.00hrs, all in one stream on the northern route escorted by 867 fighters of 8th Air Force and Fighter Command. In the bad weather, 91 out of 904 gliders taking off failed to arrive or were lost over Holland. At 13.00hrs two battalions of 327th Glider Infantry Regiment and some divisional troops, a total of 2,656 men, 146 jeeps, 109 trailers and two bulldozers, reached 101st Airborne safely in 428 gliders, and Major General Taylor ordered his deputy, Brigadier General Gerald Higgins (at 34, the youngest general in the US Army), to take over the western flank of his defences. Within the hour, 502nd Parachute Infantry reinforced by British tanks from 8th Armoured Brigade attacked 59th Infantry Division's positions at Best and took more than 1,400 prisoners; the village itself remained in German hands. Farther north, a probe by 59th Infantry Division towards Veghel was beaten off by the Americans.

On Groesbeek heights the morning attack by Corps 'Feldt' had overrun part of 82nd Airborne's landing zones, which were cleared in a rifle charge by 505th Parachute Infantry just as 385 gliders landed with 1,782 men and the remainder of the division's artillery (12 75mm guns, 12 105mm guns and eight 57mm anti-tank guns) at 13.00hrs, almost capturing General Feldt himself. As the tug aircraft departed, 135 B-24 Liberators of 8th Air Force dropped resupply to 82nd Airborne (80 per cent of which was recovered) and a further 117 Liberators dropped resupply to 101st Airborne (50 per cent recovered), losing 11 aircraft. At 17.00hrs Browning ordered Gavin to plan for a night attack on Nijmegen bridge, then changed his mind and cancelled the attack.

West of Arnhem the British second wave arrived at 15.00hrs to heavy German anti-aircraft fire which set fire to the heath below them. Hackett's 4th Parachute Brigade, in 124 Dakotas, dropped from 800ft (250m) right on top of 3rd Dutch SS Police Battalion, which was skirmishing with 1st Airlanding Brigade, causing the Dutch SS to rout. The remainder of the South Staffordshire Regiment and the rest of the divisional troops also landed in 296 gliders, a total of 2,119 men. Only one Dakota was lost, but 20 escorting fighters were shot down holding off 90 Luftwaffe aircraft.

This landing was followed by 145 Stirlings and Dakotas of RAF 38 and 46 Group on resupply. But the intended supply drop zone was still in German hands, and the Germans copied the British recognition signals. Most of the aircraft were hit by anti-aircraft fire, and of 87 tons dropped only 12 tons reached 1st British Airborne, for the loss of 13 aircraft.

On landing, Hackett was surprised to be told by Mackenzie that Hicks was commanding the division, and was taking away 11th Battalion of the Parachute Regiment and the South Staffordshires to reinforce 1st Parachute Brigade's attack. Hackett arrived at the Hartenstein Hotel, now established as 1st British Airborne's Headquarters, shortly before midnight, where Hicks ordered him to send his remaining two battalions at once up alongside 1st Parachute Brigade towards Arnhem. Hackett protested that he needed a plan, and that his brigade should attack towards its original objective of the high ground. A heated exchange followed in which Hicks accused Hackett of trying to take the division from him, but finally agreed to a delay.

The absence of the commander of 1st British Airborne at this point was critical. What mattered was a bridgehead over the Lower Rhine. If Hicks had given up the original objective of Arnhem bridge he could have secured the Heveadorp ferry and the ground on either side, dug in and waited for XXX Corps. But this would have meant disobeying Browning's orders, and abandoning Frost.

With the junction between XXX Corps and 101st Airborne complete, Major General Taylor came under Horrocks' command. In turn, 50th (Northumbrian) Division was passed to VIII Corps under Lieutenant General O'Connor and began to move up towards Eindhoven. Just on midnight, VIII Corps began its delayed supporting attack with an assault crossing of the Meuse–Escaut Canal at Lille St Hubert by 3rd Division, part of which was still on the road from Brussels.

After two days, the battle was starting to swing against Montgomery. Despite breaking through the German defences, XXX Corps was checked at Son while the two flanking Army Corps had yet to make an impact. I Airborne Corps had lost any advantage of surprise from its airborne assault and had fallen into disarray. There was little information available to 21st Army Group on which to base an assessment, and no British reserve with which to influence the battle.

On the other side, Model's counter-attack was now ready.

The German counter-attack, 19 September

On Tuesday (D+2) the weather continued with fog in the morning and rain all day. The third wave of flights from England, due to take off at 10.00hrs, was fogbound until 13.00hrs when the last battalion of 327th Glider Infantry took off with 101st Airborne's artillery in 385 gliders, of which 189 were lost or turned back. The 428 gliders carrying 82nd Airborne's reinforcements, chiefly two battalions of 325th Glider Infantry, remained grounded all day. The 114 Dakotas of 1st Polish Parachute Brigade were also grounded, but the brigade's small component of 35 gliders took off alone.

News of these changes was not passed by First Allied Airborne Army to 2nd Tactical Air Force in Belgium, which continued to fly support according to the original timetable. As a result, the airborne troops in Holland received no close air support, compared to 125 Luftwaffe fighter sorties. During the day, 43 Allied aircraft and 73 gliders were lost. Considering his job complete, Lieutenant General Brereton flew to Brussels with Ridgway and drove on to Eindhoven, wearing his dress uniform complete with medals, to watch the victory.

At 03.30hrs in the dark and fog at Arnhem, 1st Parachute Brigade started its attack eastward along the line of the Lower Rhine, while 4th Parachute Brigade (10th and 156th Battalions of the Parachute Regiment) moved north-east across the railway line towards the high ground. 1st Parachute Brigade made about 400m towards the bridge before the fog lifted shortly after dawn, when it found itself caught in a German crossfire on the river road, between 20mm multi-barrelled anti-aircraft guns firing from the southern bank and SS-Kampfgruppe 'Spindler' from the embankment to the north. By 10.00hrs the British attack had collapsed and been routed. At the end of the day, 1st Battalion of the Parachute Regiment numbered 40 unwounded men, while 3rd Battalion escaped with 116 men.

The attack through the town by 11th Battalion of the Parachute Regiment and 2nd Battalion of the South Staffordshires also met little success, reducing them to about 150 and 200 men respectively in the day's fighting. But by 07.15hrs they had driven SS-Kampfgruppe 'Spindler' back far enough to free Major General Urquhart from his attic. Urquhart reached the Hartenstein minutes later by jeep, and began to re-organize what remained of his division. Hackett's attack north-east was reinforced by 7th Battalion of the King's Own Scottish Borderers from 1st Airlanding Brigade, leaving only 1st Battalion of the Border Regiment in reserve. Warnings were broadcast to 1st Polish Parachute Brigade not to land on its planned zones, which were under German control. Urquhart also ordered Colonel Hilary Barlow, deputy commander of 1st Airlanding Brigade, to take command of the street battle in Arnhem. Barlow set off towards the fighting and was never seen again, alive or dead. Years later, his battered cigarette case was found less than 1,000m from Arnhem bridge.

At Son, the Bailey bridge was complete, and the Guards Armoured resumed their advance at dawn. By 08.20hrs the Household Cavalry reached Grave bridge, where Browning and Gavin were waiting for Horrocks, with the Grenadiers arriving two hours later. The journey of 53 miles (85km) from Joe's Bridge to Nijmegen had taken the Guards Armoured 42 hours and 130 casualties.

The arrival of XXX Corps put 82nd Airborne under Horrocks, who was increasingly unwell, and left Browning commanding only 1st British Airborne, with which he was barely in contact. The two Army Corps commanders, with Gavin and Adair, set up a joint HQ near Heumen and proceeded to command by a form of mutual agreement.

With 325th Glider Infantry delayed, Gavin had organized 450 of his glider pilots into an improvised battalion and was grateful for support from 8th Armoured Brigade and the Guards Armoured. An attack by 2/505th Parachute Infantry with the Grenadiers at Nijmegen began that afternoon but again failed to reach the bridge. Gavin proposed an assault crossing of the Waal to take the bridge from both ends, and Horrocks ordered XXX Corps' assault boats forward from Hechtel, through the rest of the traffic strung out on the highway.

East of Son, 107th Panzer Brigade (a battalion of PzKpfw V Panther tanks and a regiment of Panzergrenadiers) arrived for Student's planned pincer attack with 59th Infantry Division from Best. This was pre-empted early in the afternoon by a renewed attack by 101st Airborne and 8th Armoured Brigade which routed 59th Infantry Division north of Best, securing 1,400 prisoners. 107th Panzer Brigade attacked by itself later in the afternoon from the east across the difficult country and almost overran 101st Airborne's Headquarters at Son before Taylor could improvise a successful defence. While this was happening, 196 gliders landed with half Taylor's expected artillery and 1,341 out of 2,310 troops, followed by 60 Dakotas which delivered only 40 out of 256 tons of stores on target.

At Arnhem, by mid-afternoon the fighting had been continuous for 48 hours, and 1st British Airborne's attack was being ground down by lack of supplies, high casualties and sheer exhaustion. More German armour and artillery were arriving all the time, including 208th Assault Brigade (Sturmgeschütz IIIs) from Denmark and the first guns of Flak Brigade 'von Swoboda'. Neither Generalleutnant von Tettau to the west nor Obersturmbahnführer Harzer to the east had a clear picture of the battle, or could coordinate their own forces, but 4th Parachute Brigade found its drive north-east firmly blocked.

Under fire from SS-Kampfgruppe 'Krafft' and threatened from the west, Hackett began to pull his brigade back south of the railway line at 16.00hrs. Just at this moment the Polish gliders arrived without an escort and landed between the British and German forces on their planned landing zone, having failed to receive Urquhart's warning. Only two Polish anti-tank guns and a handful of men survived to join the British. By the end of the day, Hackett's three battalions each numbered about 250 men. Resupply aircraft of RAF 38 and 46 Group following the Poles, 63 Dakotas and 100 Stirlings, dropped only 31 out of 390 tons correctly to 1st British Airborne, losing 13 aircraft.

On Arnhem bridge, the day began with a German air raid, followed by shells and mortars from SS-Kampfgruppe 'Knaust' to the north and SS-Kampfgruppe 'Brinkmann' to the east. Frost now had only 250 unwounded men in ten of the 18 houses he had first occupied. Protecting the wounded and prisoners was becoming a critical problem, as were food, water and ammunition. The battle for Arnhem bridge had become a waking nightmare in which the troops lost track of time. The Germans continued to blast the British out of their positions, but every time they attacked they were driven back, and the bridge remained closed. A summons to Frost to surrender was contemptuously rejected.

On the left flank of XXX Corps' drive towards Arnhem, 53rd Division of XII Corps had exhausted itself reaching the Turnhout–Eindhoven road. 7th Armoured Division took over the Aart bridgehead, and 15th Division sidestepped eastward to pass through 53rd Division next day. On the right flank, 3rd Division of VIII Corps had almost reached Weert, and 11th Armoured Division had passed through towards Helmond, reaching just south-east of

Eindhoven. The pressure on 101st Airborne led Dempsey to reinforce Taylor with a further armoured battalion from VIII Corps' 4th Armoured Brigade.

As dusk fell, the Luftwaffe bombed Eindhoven with 120 Ju 87s and Ju 88s (its only long-range bombing raid of autumn 1944 in Western Europe), causing at least 1,000 civilian casualties. Brereton and Ridgway, who had just arrived in the town by jeep, were caught up in the bombing and separated. Next morning Ridgway pressed on northwards to meet Taylor and Gavin at their respective headquarters. Brereton went separately to see Taylor at Son before turning back, and flew next day to SHAEF Headquarters to attend a planning conference, making no further effort to influence the battle.

The stalemate, 20 September

The fog and rain continued into Wednesday (D+3), grounding the Poles and 325th Glider Infantry in England once again. Only resupply drops were possible, and 82nd Airborne received 80 per cent of its supplies. By dawn Urquhart had pulled 4th Parachute Brigade back and assembled his division into a thumb-shaped pocket at Oosterbeek with its base on the Lower Rhine. Using the Phantom radio equipment, Urquhart agreed with I Airborne Corps that the Poles should now land at Driel, opposite the Heveadorp ferry, to establish a bridgehead. Urquhart got through on the BBC radio to change 1st British Airborne's supply drop zones, but dropping canisters into the woods and streets of Oosterbeek against the intense German anti-aircraft fire was haphazard, and only 13 per cent of its intended supplies reached 1st British Airborne.

Uncoordinated German attacks continued all the way around the British perimeter at Oosterbeek, with the forces intermingled in the woods and houses. An attack shortly after dawn by Kampfgruppe 'von Tettau' and SS-Kampfgruppe 'Krafft' against the perimeter was

Soldiers of 101st Airborne take cover as a convoy of XXX Corps trucks comes under German fire on 'Hell's Highway' north of Eindhoven, Wednesday 20 September. The American defence was handicapped by all their movement being cross-country, as the road was reserved for the British. Although they were mostly unsuccessful, the delays imposed by these German attacks on XXX Corps' movement up the road helped decide the battle. (IWM – BU1062) heavily repulsed. With neither side strong enough to make a decisive attack the fighting began to slow down, largely from exhaustion, into an affair of snipers and mortars. In at least one house the British and Germans held different floors and passed rations to each other, while 1st British Airborne found time during the battle to produce a one-sheet newspaper.

But this slowing of the pace did nothing to diminish the casualties. By the end of the day no Parachute Regiment battalion numbered more than 100 men, and only 1st Battalion of the Border Regiment was still intact. Within the perimeter both movement and care of the wounded became impossible, with the Main Dressing Stations coming under fire. By agreement the British pulled back slightly at midday to give the Germans possession of these buildings, allowing them to tend the wounded properly. This was one of several incidents of cooperation between enemies in a very hard-fought battle. Model further ordered that all civilians in Arnhem and Oosterbeek, which were now in a battle zone, were to be evacuated, which took four days to complete. The 'Orange Battalion' of the PAN with 1st British Airborne, some of whom fought at Arnhem bridge, quietly disbanded next day.

North of Eindhoven, on what 101st Airborne had started to call 'Hell's Highway', the German attacks began again at dawn. 107th Panzer Brigade advanced once more from the east against Son but was beaten back by 101st Airborne with British armoured support. Taylor then switched to a limited offensive, and 1/501st Parachute Infantry at Heeswijk took 418 German prisoners.

While 101st Airborne and 8th Armoured Brigade fought, XXX Corps continued up the road as best it could, including the delayed assault boats and 43rd (Wessex) Division moving from Hechtel. The first troops of the division's 130th Brigade reached Grave at noon, but on the congested road the full division took even longer than the Guards Armoured to reach Nijmegen.

At I Airborne Corps Headquarters the delays on Hell's Highway together with the news from Arnhem caused Gavin to snap at Horrocks' slowness, while the normally icy

Cromwell tanks of the Guards Armoured Division, heavily festooned with external baggage, driving up 'Hell's Highway' just south of Nijmegen, Wednesday 20 September. The windmills in the area were used to pump water along the nearby drainage ditches. Throughout the battle, the last vehicles of a division moving up the road to Arnhem were at least 24 hours behind its leading troops. (IWM – B10131)

Browning threw an ink bottle at a picture of a German general on the wall. Help was offered by 52nd (Lowland) Division, which volunteered to fly into an airstrip near Nijmegen next day. Browning, still expecting the Poles and 325th Glider Infantry, turned the offer down.

Because of 82nd Airborne's weakness and the expected major attack at Groesbeek, the Guards Armoured was broken up to provide support. While the Grenadiers and Irish Guards prepared for the assault crossing, the Welsh Guards covered Grave bridge, and the Coldstream supported the Groesbeek position. Meanwhile the Household Cavalry patrolled west as far as the main supply depot for First Parachute Army at Oss, where the pragmatic storekeepers issued supplies to both sides (German rations from Oss reached as far south as British 3rd Division at Weert during the battle).

That morning, the Irish Guards and 504th Parachute Infantry started to clear the suburbs of Nijmegen for the river crossing, while the Grenadiers and 505th Parachute Infantry moved towards the bridge. The assault crossing began at 14.40hrs, just after the arrival of the boats, with an attack by Typhoons of RAF 83 Group, followed by a ten-minute artillery and smoke bombardment from 100 guns of XXX Corps and the tanks of the Irish Guards. At 15.00hrs two companies of 3/504th Parachute Infantry crossed the Waal west of the bridges in 19ft (5.8m) assault boats under heavy German artillery fire. Half the boats reached the far shore, and six successive journeys brought the rest of 3/504th Parachute Infantry and 1/504th Parachute Infantry across. Once ashore, 3/504th Parachute Infantry attacked eastwards, clearing first the railway bridge then the road bridge at the cost of 107 casualties. Some 417 German bodies were later recovered from the railway bridge area alone. At the same time, 505th Parachute Infantry and the Grenadiers attacked through the town towards the road bridge, the first Grenadier tanks crossing at 19.10hrs. In defiance of Model's orders, Brigadeführer Harmel ordered the bridge blown as the Grenadiers crossed, but the charges failed to go off. Later that night Model, not realizing he was too late, authorized Bittrich to blow Nijmegen bridge if necessary.

On the other side of the Oosterbeek pocket, German infantry dug in among the trees. From their general appearance, these troops seem to be from one of the various improvised formations which made up Kampfgruppe 'von Tettau'. (IWM – MH3956)

On Groesbeek heights, Corps 'Feldt' resumed its attack at dawn with 406th Landesschutzen Division to the north and the newly arrived II Parachute Corps to the south. Serving under General Feldt, this consisted of the training battalions of 3rd and 5th Parachute Divisions, both of which had been destroyed in Normandy. By mid-morning 82nd Airborne had identified this attack as coming from both full strength parachute divisions and alerted Gavin, who returned to his command post from Nijmegen. At first II Parachute Corps' drive met considerable success, and by evening it had almost reached the bridge at Heumen, threatening to cut the road behind 82nd Airborne. But counter-attacks by 508th Parachute Infantry, supported by the Coldstream, gradually restored the position.

At Arnhem bridge, Frost had water for only one more day, and Urquhart advised I Airborne Corps that relief of the bridge by Guards Armoured was now critical. The German bombardment continued, blasting down the buildings still held by the British and using flame-throwers to clear them from the rubble. At noon Frost himself was badly wounded by a mortar blast, and Major Gough took over command of the remaining troops. Almost out of ammunition, with wounded crowded into cellars, the British held on to their shrinking perimeter. Shortly after 18.00hrs four PzKpfw VI Tiger tanks at last crashed their way across Arnhem bridge from north to south, but nothing else could follow them. At 21.00hrs Gough negotiated a truce enabling the Germans to collect over 200 wounded of both sides from the cellars, including Frost, who became a prisoner.

Much farther south, the British flanking operations remained painfully slow. In a last effort by XII Corps, 15th Division forced the line of the Wilhelmina Canal at Best, but still the village itself remained in German hands. VIII Corps began moving 69th Brigade of 50th Division northward to reinforce 101st Airborne, while 11th Armoured Division made some progress towards Helmond. With the German flanks growing stronger, these attacks across country stood little chance.

At Oosterbeek, far from expecting to crush 1st British Airborne, Model put Kampfgruppe 'von Tettau' under II SS Panzer Corps in order to check an expected breakout by Urquhart's troops. More German reinforcements continued to arrive, and XII SS Corps was expected with the new 180th Infantry Division and 190th Infantry Division within a week. In keeping with German doctrine rather than expecting any chance of success, Bittrich also ordered Harmel to counter-attack and retake Nijmegen next morning.

With only three battalions of the 'Frundsberg' between Nijmegen and Arnhem, it seemed that nothing could stop the Allies reaching Arnhem bridge that night. But on the other side Adair's Guards Armoured, fought to a standstill, would not advance at night into the *polder* of the 'island' without infantry, and Horrocks let them halt.

Meanwhile, far away from the battlefield, SHAEF Headquarters completed its move from Granville to Versailles, just west of Paris, drastically improving its communications. After four days, it was becoming clear to the senior Allied commanders that the original *Market Garden* plan had failed, and that the war against Germany was by no means over yet. The first hint of a change in attitude came when Montgomery at 21st Army Group Headquarters received a message from Eisenhower denying that SHAEF had ever intended a broad front advance and reaffirming priority for the northern thrust. With *Market Garden* a failure and both sides temporarily locked in an exhausted stalemate, the whole nature of the battle of Arnhem was about to change.

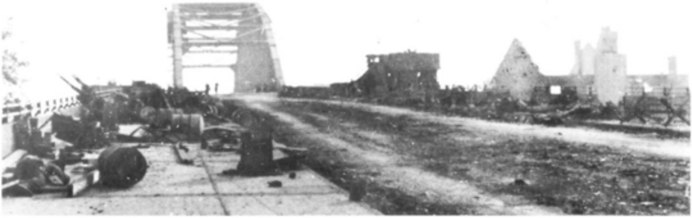
The new Allied plan, 21 to 22 September

The fog and rain continued into Thursday (D+4), which was bitingly cold. As dawn arrived, Generalfeldmarschall Model at Army Group B issued fresh orders. Corps 'Feldt' was to hold its position. It had spent itself in the attack over the Groesbeek heights, and with Nijmegen bridge now in Allied hands there was little that it could do. Model placed all troops as far south as Elst under II SS Panzer Corps, which was to wipe out the British at Arnhem while containing any drive north of Nijmegen. Student's First Parachute Army was to organize a coordinated pincer attack by LXXXVIII Corps and LXXXVI Corps against Hell's Highway for next day.

At Arnhem bridge, the last fight began at about 09.00hrs, as Gough and his men tried to break out northwards against SS-Kampfgruppe 'Knaust'. There was no formal surrender or end to the fighting. In small groups, the British either ran out of ammunition or were overwhelmed. Some refused to give up or fought on with knives, and the last shots were not fired at Arnhem bridge for another two days. But at 12.00hrs, SS-Kampfgruppe 'Knaust' at last crossed Arnhem bridge. Frost's men had fought for 88 hours without relief, the last 12 of them without food or water.

In the Oosterbeek pocket, Urquhart re-organized his defence, placing Hicks in charge of the western face against Kampfgruppe 'von Tettau', and Hackett in charge of the eastern face against SS-Kampfgruppe 'Hohenstauffen'. At 09.00hrs an attack by Kampfgruppe 'von Tettau' drove 1st Battalion of the Border Regiment back off the Westerbouwing hill (30m high), the crucial high ground that overlooked the Heveadorp ferry, and away from the ferry itself, which was destroyed in the fighting. From the Westerbouwing, German fire could dominate any attempted river crossing. In their confusion and exhaustion, neither side had appreciated the vital significance of this ground. Kampfgruppe 'von Tettau' pushed Hick's troops back about 800m during the day, but Model's orders to eliminate the British pocket could not be carried out with the

Arnhem bridge, taken by a German photographer from the north side of the ramp looking south, shortly after the last stand of Frost's men, Thursday 21 September. The burnt-out German pillbox can be seen to the right of the bridge, together with the rubble of buildings destroyed in the fighting. The vehicles wrecked in 9th SS Reconnaissance Battalion's attack have been cleared away to the left and the bridge is now open. (IWM – HU2127)



available forces. Instead, the Germans set up loudspeakers to play music to the British, along with invitations to surrender, while the sniping and mortaring continued.

At Nijmegen, the way across the two bridges was finally cleared of German snipers by 10.00hrs. Two hours later, while the Grenadiers recovered, the Irish Guards led off northwards with the Welsh Guards following. The attack started just as SS-Kampfgruppe 'Knaust' was crossing Arnhem bridge. Short of ammunition, artillery and air cover, the tanks of the Guards Armoured pushed up the exposed causeway road as far as Elst, and halted in the face of German fire. By 16.00hrs, SS-Kampfgruppe 'Knaust' had reached Elst from Arnhem to establish a firm block.

Meanwhile, 43rd Division, which was still waiting for its last brigade to get through from Eindhoven, was busy clearing the remaining pockets of German resistance from Nijmegen. Horrocks ordered the division, under Major General G. I. Thomas, to take over the lead from the spent Guards Armoured, advance through Driel and link up with 1st British Airborne at Heveadorp. Relieved of much of the responsibility for Nijmegen, 82nd Airborne began a general attack late in the afternoon with 504th Parachute Infantry and 508th Parachute Infantry, which cleared Corps 'Feldt' off the Groesbeek heights before establishing a solid defence.

During the afternoon, 1st British Airborne established firm radio contact with XXX Corps through the Royal Artillery's 64th Medium Regiment. The distance from Nijmegen to Arnhem is only 11 miles (17km), and through this link Urquhart could call for fire support from the whole of XXX Corps' artillery, drastically reducing the German advantage north of the Lower Rhine. Without this fire support the Oosterbeek pocket could not have been held, and after the battle Urquhart tried unsuccessfully to have 64th Medium Regiment awarded British Airborne insignia. In response to this stiffening resistance, Model ordered specialist troops and equipment for street fighting to be flown into Deelen by Junkers Ju 52 transport aircraft, and was promised 506th Heavy Tank Battalion, freshly equipped with 45 of the formidable PzKpfw VIB King Tiger tanks, from eastern Germany.

Back in England, 1st Polish Parachute Brigade's three infantry battalions took off at 14.00hrs, flying on the northern route. Of its 114 Dakotas, 41 turned back in the bad weather (including virtually the whole of 1st Battalion) and three landed in Brussels. Over Driel more than 100 Luftwaffe fighters were waiting for the Poles, of which 25 broke through and together with anti-aircraft fire claimed 13 more Dakotas. At 17.00hrs, Major General Sosabowski landed at Driel with 750 men and no heavy equipment, which had been lost in the gliders two days before.

To the Germans, the Polish landing, coinciding with the move south to Elst by SS-Kampfgruppe 'Knaust' to confront the Guards Armoured, appeared as an attempt to outflank them and capture Arnhem bridge once more from the south. Obersturmbahnführer Harzer rapidly organized 2,500 sailors, airmen, coastal defence troops, Dutch SS police and German infantry as a blocking force (known as 'Sperrverband Harzer') between the Poles and the bridge, west of the Nijmegen road. Flying resupply after the Poles, 115 transport aircraft of RAF 38 Group were intercepted by ten Fw 190s which broke through the fighter screen again. Some 23 resupply aircraft were shot down and 38 damaged by fighters or flak, and only 41 out of 300 tons got through to the British at Oosterbeek. After nightfall, the Poles began planning to cross the Lower Rhine, but no boats arrived from XXX Corps before dawn.

North of Eindhoven, 101st Airborne continued to push the Germans back on either side of Hell's Highway in a series of limited attacks supported by British armour. The drives by VIII Corps and XII Corps, which had fought their way across country roughly level with the line of the Wilhelmina Canal, had come virtually to a halt. Lieutenant General Dempsey began to move Second Army Headquarters to St Oedenrode, and Field Marshal Montgomery established 21st Army Group Tactical Headquarters just south of Eindhoven to be in closer touch with the battle.

In response to General Eisenhower's earlier message, Montgomery sent a signal to SHAEF demanding that Eisenhower make good his commitment to the northern thrust by halting Patton's Third US Army and placing Hodges' First US Army at least under some form of British control. On the same day, Patton arrived at Versailles with Bradley's blessing, demanding more troops for his thrust across the Rhine. Eisenhower's response was to summon a major conference of his Army Group and Army commanders – the first since before the D-Day landings on 6 June – for the next day.

Friday 22 September (D+5) was very misty, and there were no resupply flights from England, but the weather was beginning to lift. At 09.00hrs General Student's attack on Hell's Highway began with Kampfgruppe 'Huber' (part of 59th Infantry Divison) from the west and Kampfgruppe 'Walther' (now mainly 107th Panzer Brigade) from the east, breaking through to cut the largely undefended section of road between Uden and Grave. This also split 69th Brigade of British 50th Division, which was moving up to cover the gap between 101st Airborne and 82nd Airborne. In response, 101st Airborne, now under XXX Corps with its long familiarity with air support procedures, obtained 119 rocket-firing Typhoon sorties from RAF 83 Group along Hell's Highway during the day.

Not far away over Kleve, completely divorced from the Arnhem battle, 9th Air Force fighters dominated the skies, while 8th Air Force and Bomber Command, whose bombers might have influenced the battle considerably, flew raids against German cities. Only at Arnhem and Nijmegen did the Germans continue to enjoy air superiority.

Paratroopers of 82nd Airborne Division watch as Cromwell tanks of the Guards Armoured Division, probably from 2nd (Armoured Reconnaissance) Battalion of the Welsh Guards, move across Nijmegen bridge northward towards Arnhem on the morning of Thursday 21 September. The low, flat ground of the 'island' can be seen in the distance on the right. (IWM – B10172)

Lieutenant General Dempsey's Chief of Staff, attempting to reach Horrocks at Nijmegen by aircraft, was shot down but survived.

Major General Taylor received some warning of the German pincer attack through the PAN, and rushed 150 men of 506th Parachute Infantry to Uden by 11.00hrs, only minutes before the German tanks arrived. A limited attack north-west by 501st and 502nd Parachute Infantry had to be abandoned as Kampfgruppe 'Huber' reached Veghel by 14.00hrs, putting the bridge under fire, and in the course of the fighting Colonel John H. Michaelis, commanding 501st Parachute Infantry, was seriously wounded. Brigadier General Anthony McAuliffe, the division's artillery commander, began with 2/501st Parachute Infantry defending Veghel and finished with eight battalions as American and British reinforcements arrived. Horrocks was forced to turn the whole of 32nd Guards Brigade (the Grenadiers and Coldstream) around to drive back south down Hell's Highway from Grave to Uden, clearing the road of Germans. For a crucial day, supplies and equipment, above all river-crossing equipment, could not travel beyond Veghel.

The renewed attempt by XXX Corps to reach 1st British Airborne began shortly after dawn with orders from Horrocks to take all risks. 43rd Divison attacked north from Nijmegen, with 214th Brigade moving towards Driel, while 129th Brigade and the Irish Guards Group attacked at Elst. On the exposed 'island' movement within sight of the enemy was almost impossible for either side, and unsupported vehicles were open targets. But at 08.30hrs a few armoured cars of the Household Cavalry found a route through to the Poles at Driel. Strictly, this completed the link between XXX Corps and 1st British Airborne, four days and 18 hours since the start of *Market Garden*. That afternoon Lieutenant Colonel Mackenzie crossed the Lower Rhine and used the Households' radios to send a long signal to Horrocks and Browning

Men of the Glider Pilot Regiment, carrying Sten sub-machine-guns and pistols, fight their way through the rubble of a building in Oosterbeek, Saturday 23 September. The 1,200 men of the Glider Pilot Regiment at Arnhem formed two 'wings', each the equivalent of a battalion, and played a major part in the defence of the perimeter. (IWM – BU1121) before driving off to Nijmegen. By late afternoon a single infantry battalion, 5th Battalion of the Duke of Cornwall's Light Infantry with some tanks, had reached the Poles.

At 21.00hrs Sosabowski, acting on Horrocks' orders, attempted a river crossing towards Heveadorp with four rubber boats, all that were available. Under intense German fire, about 50 Poles crossed, of whom 35 survived to join the Border Regiment. A plan for 5th Battalion of the Duke of Cornwall's Light Infantry to follow them later that night was called off as no further boats or DUKW amphibious craft had arrived. German attacks continued all around the Oosterbeek pocket, and at 21.44hrs Urquhart signalled Browning that relief within 24 hours was vital. Bittrich meanwhile conferred with Harzer and von Tettau to plan the final destruction of 1st British Airborne next day.

While the fighting raged all day from Veghel to Oosterbeek, Eisenhower's Army Group and Army commanders assembled at Versailles. Even for this vital meeting, Montgomery stuck to his custom and sent Major General de Guingand to represent him, reportedly because he did not trust himself to speak to the American generals. This meeting began to repair the mistakes in the original *Market Garden* plan, as Eisenhower asserted the authority that had drifted for the last month. Instead of individual actions against a defeated enemy, Eisenhower now insisted on a coordinated advance to the Rhine by all his Armies, stressing the importance of First Canadian Army's attack to clear the Scheldt and open Antwerp now that the war was going to last beyond September. Bradley was instructed to halt Patton (the formal order to Third US Army was issued next day), while First US Army was ordered to swing northwards towards Aachen, sending XIX Corps under Major General Charles H. Corlett (temporarily reduced by Bradley to two divisions) northwards to cooperate with British VIII Corps. In return, Second British Army would change its axis of advance, with VIII Corps leading north-east across country towards Venlo and Kleve, instead of XXX Corps heading north past Arnhem. Although First US Army remained under Bradley, Montgomery was allowed direct communication with it.

That afternoon Montgomery visited 3rd Division at Weert, the first of a series of visits to explain the new plan throughout Second British Army. Although a bridgehead at Arnhem might be useful, and there were humanitarian reasons for saving 1st British Airborne, from this point XXX Corps' efforts north of Nijmegen became a secondary operation, and any idea of an advance past Arnhem was given up. It says much for Montgomory's state of mind that he seems to have believed that this new plan was feasible, and that Lieutenant General O'Connor might yet rescue his battle for him.

Next day, Lieutenant General Dempsey placed 101st Airborne under VIII Corps, while 50th Division was reinforced by 131st Brigade of 7th Armoured from XII Corps, and – together with the Royal Netherlands Brigade 'Prinses Irene' – took over Nijmegen from 43rd Division. VIII Corps now had to fight on two fronts: while 101st Airborne and 50th Division defended against attacks from the west and north-west, 3rd Division and 11th Armoured Division were to drive north-east to the Rhine, keeping step with US XIX Corps. Horrocks' XXX Corps was left with the troops north of Grave – 43rd Division, 82nd Airborne and the fragmented Guards Armoured – while I Airborne Corps continued to command the survivors of 1st British Airborne. After meetings between Montgomery, Dempsey, their Army Corps and divisional commanders, Second British Army signalled I Airborne Corps at 20.20hrs that it had permission to withdraw 1st British Airborne if necessary, just over 24 hours after Urquhart's appeal.

The end at Arnhem, 23 to 26 September

Saturday 23 September (D+6) produced the first good weather since the start of *Market Garden*, despite the morning fog and the rain that night, and 2nd Tactical Air Force was heavily active over Oosterbeek. With artillery and air support, 1st British Airborne held on to its foxholes and houses, and once more Harzer and von Tettau could not break through the perimeter. In the afternoon, an angry Model visited II SS Panzer Corps Headquarters and gave Bittrich 24 more hours to wipe 1st British Airborne out. Model also changed Army Group B's command structure, placing all forces west of the *Market Garden* salient under Fifteenth Army, and all those to the east under First Parachute Army, at last relieving Armed Forces Command Netherlands and Wehrkreiss VI of their fighting responsibilities. So far, Model's defensive scheme had largely succeeded, stopping *Market Garden* only two-thirds of the way to its objective on the Zuider Zee. Now, in the classic manner of German counterstrokes on the Eastern Front, he planned to destroy both I Airborne Corps and XXX Corps north of Nijmegen and regain the line of the Waal.

Farther south, the Germans renewed their attacks against Veghel in the morning with 6th Parachute Regiment (now part of Kampfgruppe 'Chill') from the west and Kampfgruppe 'Walther' from the east, but they were both driven off by noon. Three hours later, 506th Parachute Infantry with British armour linked with 32nd Guards Brigade at Uden, reopening Hell's Highway.

German infantry in the Oosterbeek pocket, late in the fighting. The mixture of uniforms worn and weapons carried by these men tells its own story. The German ability to assemble improvised forces at short notice was much admired by the Allies, but although these could be strong in defence, they had great difficulty making coordinated attacks. (IWM – HU2126)

At 13.00hrs, the delayed last wave of airborne reinforcements took off from England in the largest *Market Garden* airlift since its first day. Escorted by fighters of 8th Air Force, 654 troop carriers and 490 gliders flew on the northern route almost without incident to land at 15.00hrs. 82nd Airborne received 3,385 troops in 428 gliders, mainly the delayed 325th Glider Infantry Regiment, which should have arrived four days before. 101st Airborne received 907th Glider Field Artillery Battalion and the last of 327th Glider Infantry. The seaborne tails of both divisions also arrived from England through the Normandy beaches, completing their deployment.

1st Battalion of 1st Polish Parachute Brigade, which had turned back on Thursday 21 September, dropped at Oude Keent, a disused airfield just outside Grave which I Airborne Corps planned to use for resupply. The battalion then marched northwards to join its brigade, which had been placed under 130th Brigade of 43rd Division by Horrocks. At Driel, 41 USAAF Dakotas dropped supplies and equipment to Sosabowski, who was increasingly ready to show his disgust with his treatment and that of his brigade by the British.

On the 'island', XXX Corps' advance against SS-Kampfgruppe 'Frundsberg' made little progress, delayed until supplies and equipment could reach it while Hell's Highway was cleared farther south. Late in the morning Lieutenant Colonel Mackenzie finally reached Browning at I Airborne Corps Headquarters. Browning gave Mackenzie a message of greeting to take back to Urquhart, but other than expressing his anger with 43rd Division's slow progress he had nothing to offer. That afternoon 130th Brigade, with more river- crossing equipment, linked up with the Poles at Driel, and after nightfall Sosabowksi sent 200 men of his 1st Battalion across the Lower Rhine in assault boats to join 1st British Airborne. Next morning Mackenzie also recrossed the Lower Rhine to rejoin his division.

On Sunday 24 September (D+7) the weather remained reasonable after some morning fog, and 2nd Tactical Air Force flew 22 close air support sorties for 1st British Airborne from mid-afternoon, despite problems in identifying targets in the shrinking Oosterbeek pocket. Through XXX Corps' artillery support and its own fighting qualities, 1st British Airborne continued to hold the perimeter, although Brigadier Hackett was wounded by a shellburst that morning. Urquhart's men were now threatened with the same fate that had overwhelmed Frost, a collapse from exhaustion and lack of ammunition. At 15.00hrs a medical truce came into force, carefully negotiated between 1st British Airborne and II SS Panzer Corps, which allowed the transfer of 700 wounded to the Germans, followed by 500 more next day. This left Urquhart with about 1,800 troops organized in small groups to defend the pocket.

Both sides at Arnhem had now been fighting for a week without rest, almost without sleep, and a single fresh formation might swing the battle. This arrived on the German side in the form of the King Tigers of 506th Heavy Tank Battalion, of which two companies (30 tanks) were sent to the 'Frundsberg' near Elst and one company to the east side of the Oosterbeek pocket. Even before these tanks arrived, XXX Corps had made only slow progress north of Nijmegen against the German defence. The only success that day was the capture of Bemmel by 69th Brigade and the Welsh Guards.

At 09.30hrs Horrocks, together with Thomas and Sosabowski, surveyed the far side of the Lower Rhine from the steeple of Driel church. Thomas came away believing that Horrocks had issued orders for the withdrawal of 1st British Airborne that night, and began planning a crossing to seize the Westerbouwing and help Urquhart. Horrocks, who later denied he had issued these orders, then went to Second British Army Headquarters to consult

Dempsey. Who actually gave the order to withdraw from Arnhem cannot be established, but Montgomery notified London of the decision, and the forthcoming thrust north-east by VIII Corps, that evening. As news of the planned withdrawal spread there was a late flurry of activity from the airborne commanders. First Allied Airborne Army tried to arrange for 8th Air Force fighters to drop belly tanks full of supplies to 1st British Airborne, while Browning now wanted 52nd (Lowland) Division flown in, a suggestion vetoed by Dempsey and Montgomery.

In response to Generalfeldmarschall von Rundstedt's suggestion that all German troops in Holland should fall back to the Maas in the face of Second British Army's offensive, Hitler demanded instead a renewed offensive at Nijmegen and Veghel. Model took full advantage of this by requesting even more reinforcements, including the full-strength 363rd Volksgrenadier Division, which could not arrive until after the battle.

The renewed attack on Hell's Highway by Kampfgruppe 'Chill' began shortly after dawn, looking for weak spots in 101st Airborne's line. Most of the Germans were heavily repulsed, but as dusk fell the weak Parachute Battalion 'Jungwirth', reinforced by a company of Jagdpanthers of 559th Assault Battalion, cut the road once again at Koevering, just south of Veghel. Horrocks at St Oedenrode with Dempsey found that he was cut off from XXX Corps HQ for the day. No attack took place from KG 'Walther', which was finally forced to retreat by 11th Armoured Division's capture of Deurne, east of Helmond, opening the way for VIII Corps' advance. Nevertheless, with Hell's Highway closed to supply traffic once more, Dempsey ordered O'Connor to hold in place.

At 02.00hrs on Monday 25 September (D+8), 43rd Division made its crossing of the Lower Rhine to help 1st British Airborne in darkness, heavy rain and strong winds. But there were boats and DUKW amphibious craft only for two companies, or 350 men, of 4th Battalion of the Dorsetshire Regiment, of whom 315 reached the far bank to be pinned down at once by German fire. Kampfgruppe 'von Tettau' took 140 prisoners including the battalion commander, and although the Dorsets briefly held part of the Westerbouwing they achieved little else. At 08.08hrs Urquhart signalled Thomas that the evacuation, codenamed Operation *Berlin*, must take place that night. As if to emphasize the point, SS-Kampfgruppe 'von Allworden', with the new King Tigers of 506th Heavy Tank Battalion, attacked that afternoon from the east, driving deep into Urquhart's position and threatening to encircle 1st British Airborne. Artillery and 81 close-support sorties from 2nd Tactical Air Force helped the British troops hold out for another day.

During the morning, as XXX Corps finally secured Elst as well as Boxmeer, Horrocks and Browning met at I Airborne Corps Headquarters to discuss *Berlin*, while Montgomery and Dempsey met at Eindhoven. With so many Germans concentrated at Oosterbeek, the Household Cavalry patrols revealed that the Lower Rhine west of Arnhem was almost undefended, and Horrocks briefly considered making another crossing. Instead, 43rd Division mounted a simulated crossing at Renkum, 4 miles (6km) west of Oosterbeek, that night to help the withdrawal.

With assistance from British 50th Division and 7th Armoured, 506th and 502nd Parachute Infantry moved against Hoevering during the day, and at nightfall the surrounded Germans abandoned their position, having mined the road first. This was LXXXVIII Corps' last effort, and next day 101st Airborne cleared the mines and reopened Hell's Highway for good.

A British ammunition truck explodes, scattering incendiaries on to the road, having been hit by fire from Parachute Battalion 'Jungwirth' near Koevering on 'Hell's Highway', on the evening of Sunday 24 September. Much of the road at this point was lined with trees, making ambush easier for the Germans. (IWM – B10124A)

Farther east, VIII Corps drove forward against the retreating Kampfgruppe 'Walther' and 180th Infantry Division. By nightfall, 11th Armoured had reached the Maas at Boxmeer, linking up with XXX Corps. But with only two divisions attacking north-eastward, O'Connor was now completely overextended. On the Willems Canal line, 3rd Division, already holding 22 miles (35km) of front, was faced with the prospect of holding 32 miles (51km) next day. It was only saved by the arrival of 7th US Armored Division, newly returned to Corlett's US XIX Corps, which came into line beside it.

At 21.00hrs on the Lower Rhine *Berlin* began with a sustained bombardment by 43rd Division and XXX Corps artillery that lasted 11 hours. At 21.40hrs two companies of Royal Canadian Engineers with 21 stormboats (each holding 14 men) and two Royal Engineer companies with 16 assault boats started to cross the river. Leaving behind their wounded with some volunteers, 1st British Airborne started to withdraw in pouring rain through a gap barely 700m wide to the river bank. The Germans continued heavy mortaring and took 170 prisoners, but there was no attempt to rush the British troops; by 01.30hrs the withdrawal north of the Hartenstein Hotel was complete. At 02.00hrs the division's ammunition was blown up and its guns disabled, and at first light the ferrying ended. The survivors of 1st British Airborne marched from Driel to Nijmegen, where their divisional seaborne tail was waiting with clean uniforms and equipment. By 14.00hrs the Germans had occupied the remains of the Oosterbeek pocket, capturing the wounded troops who could not be moved.

With the end of *Berlin* at 05.50hrs on Tuesday 26 September (D+9), *Market Garden* also ended. Since the start of the operation, First Allied Airborne Army had despatched 4,852 troop-carrying aircraft successfully to their destinations, of which 1,293 delivered paratroops, 2,277 gliders and 1,282 resupply. Altogether 164 aircraft and 132 gliders were lost. USAAF IX Troop Carrier Command suffered 454 casualties, RAF 38 and 46 Groups a further 294 casualties. Some 39,620 troops were delivered by air to their targets (21,074 by parachute and 18,546 by glider) with 4,595 tons of stores. However, only 7.4 per cent of the stores intended for 1st British Airborne actually reached it.

A further 6,172 aircraft sorties were flown in support of *Market Garden*, more than half of them by 8th Air Force, for the loss of 125 aircraft. It is significant that 2nd Tactical Air Force flew only 534 of these sorties, and 9th Air Force 209 sorties. Browning complained that 2nd Tactical Air Force had turned down 46 out of 95 requests for air support from I Airborne Corps Headquarters, chiefly on grounds of poor target identification. The Allied air forces claimed 160 enemy aircraft shot down, and rescued 205 men from the North Sea during the operation.

At Arnhem itself, 10,300 men of 1st British Airborne Division and 1st Polish Parachute Brigade landed from the air. Some 2,587 men escaped across the Rhine in Operation *Berlin* (1,741 of 1st British Airborne, 422 of the Glider Pilot Regiment, 160 Poles and 75 from the Dorsetshire Regiment), and 240 more returned later with the aid of the PAN. About 1,600 wounded were left behind in the Oosterbeek pocket, together with 204 medical officers and chaplains who volunteered to stay. The Germans claimed 6,450 prisoners taken, wounded or not, and 1st British Airborne therefore lost about 1,300 killed. The highest proportionate losses were suffered by the Glider Pilot Regiment and Major Gough's Reconnaissance Squadron, each with more than one in five men killed. Three out of nine battalion commanders of 1st Airborne Division were killed, four more were wounded and taken prisoner, together with two out of three brigade commanders. Five Victoria Crosses were won at Arnhem, four of them posthumous, including one to a resupply aircraft pilot.

In the course of the battle, 1st Polish Parachute Brigade lost 378 casualties. The two American airborne divisions lost 3,664 men together: 1,432 from 82nd Airborne, 2,110 from 101st Airborne and 122 glider pilots. One American battalion commander was killed, another was badly wounded, a regimental commander was also wounded, and two posthumous Medals of Honor were won.

By its own estimate, the total losses for I Airborne Corps were 6,858 men. Second British Army's casualties for *Market Garden* alone are harder to calculate, but one estimate places them at 5,354 including 1,480 for XXX Corps, giving a total of 16,805 Allied casualties. German casualties, like their unit strengths, cannot be given accurately for this period of the war. Generalfeldmarschall Model estimated Army Group B casualties in *Market Garden* at 3,300, but other calculations place them as high as 2,000 dead and 6,000 wounded.

At 02.00hrs, as the last of his men were crossing the Lower Rhine, a soaked and exhausted Major General Urquhart reached I Airborne Corps Headquarters and demanded to see Lieutenant General Browning, who rose and dressed to see Urquhart for a brief conversation before directing him to bed. That evening Browning held a formal dinner party for Horrocks, Urquhart and Thomas, putting his chef to good use. Next morning, Wednesday 27 September, Urquhart went south to 21st Army Group Headquarters at Eindhoven to brief Dempsey and Montgomery himself on the battle.

In the *Market Garden* corridor, 21st Army Group was digging in. Its front, already 150 miles (240km) long on 16 September, had been extended by a long thin finger of territory stretching up Hell's Highway from Joe's Bridge to Driel, and from Boxmeer to Oss where 7th Armoured Division of XII Corps had finally linked with the Guards Armoured, adding another 130 miles (200km) to be defended. The fighting to hold this salient would continue, but the battle of Arnhem was over.

The aftermath of the battle

The end of Operation *Market Garden* was no more tidy than its beginning. The new salient held by Second British Army threatened to cut off most of the German troops in western Holland once the attack to clear the Scheldt began, and on 27 September 712th Static Division of LXXXVIII Corps tried to escape through Grave, only to be repulsed by the Coldstream. Next morning two major Luftwaffe air attacks by more than 40 aircraft including Me 262 fighter-bombers damaged both bridges at Nijmegen. This was followed by a suicide attack that night on the bridges by 12 German frogmen, which closed them for 24 hours.

On 1 October Generalfeldmarschall Model began his counter-attack against XXX Corps on the 'island' with II SS Panzer Corps from the north, XII SS Corps from the west and II Parachute Corps from the east across the Groesbeek heights. In five days the German offensive over the open *polder* was heavily defeated by Allied firepower, and on 7 October II SS Panzer Corps gave up its attacks. On the same day USAAF and RAF bombing raids closed Arnhem bridge to traffic, and on 4 February 1945 the Germans themselves blew it into the Lower Rhine.

The survivors of 1st British Airborne returned to a hero's welcome in Britain within a week of their evacuation from Arnhem, and 1st Polish Parachute Brigade joined them shortly afterwards. But the German threat to the new salient made it impossible to withdraw the two American airborne divisions. On 5 October, 101st Airborne took over 43rd Division's position on the 'island', just in time to repell Model's last attack, made by 363rd Volksgrenadier Division. Over Brereton's protests, Montgomery convinced

Survivors of 1st British Airborne recovering from Operation Berlin *in the grounds of the Missionary College in Nijmegen on Tuesday 26 September. Between them these privates and NCOs represent almost every regiment of 1st British Airborne which fought at Arnhem, but most are from 1st Battalion of the Border Regiment. (IWM – HU3722)*

Eisenhower to let him keep 82nd Airborne in line until 13 November and 101st Airborne until 27 November. The two divisions took more casualties in this period than during *Market Garden* itself. Major General Taylor was slightly wounded, and Colonel Howard Johnson, commanding 501st Parachute Infantry, was killed.

The battle of Antwerp to clear the Scheldt estuary began almost simultaneously with the end of *Market Garden.* It lasted until 28 November, when Antwerp was officially opened to cargo ships, and cost 21st Army Group 30,000 casualties. In response to the Dutch transport strike called to coincide with *Market Garden,* the Germans halted all civilian transport in the country, and 18,000 Dutch civilians died in the 'hunger winter' that followed. Nevertheless, the PAN continued to help Allied soldiers on the run in northern Holland. Brigadier Lathbury with 142 men escaped to safety in October, and Brigadier Hackett the following February.

The failure at Arnhem and the need to open the Scheldt condemned the troops of both 21st Army Group and Army Group B to a miserable winter fighting in the flat and flooded terrain of Holland. In the spring, Allied attention turned to crossing the Rhine into Germany rather than clearing Holland, and Arnhem was not finally liberated by British troops of First Canadian Army until 14 April 1945.

The OB West report on *Market Garden,* produced in October 1944, gave the decision to spread the airborne landings over more than one day as the main reason for the Allied failure. A Luftwaffe analysis added that the airborne landings were spread too thinly and made too far from the Allied front line. General Student regarded the Allied airborne landings as an immense success and blamed the final failure to reach Arnhem on XXX Corps' slow progress. In this respect, Generalfeldmarschall Model deserves credit for his skill in defending against *Market Garden,* particularly given the state of Army Group B

A German officer (with cap) identified as Brigadeführer Heinz Harmel, accompanied by some formidable-looking members of his SS-Kampfgruppe 'Frundsberg', talks to a Polish prisoner, probably in Arnhem on Tuesday 26 September. The Pole may be acting as an interpreter for the other prisoners visible in the building behind them. (IWM – HU2133)

in September 1944, and for grasping at once the vital importance of the Nijmegen bridges. Although it is known as the battle of Arnhem (or Arnhem–Oosterbeek to the Dutch), there is a case for calling *Market Garden* the battle of Nijmegen, as some Americans have done.

In October 1944, Lieutenant General Brereton reported to General Marshall and General Arnold in Washington that *Market* had been a brilliant success, which in his own terms was quite true. Lieutenant General Bradley attributed the defeat of *Market Garden* entirely to Montgomery, and to the British slowness on the 'island' north of Nijmegen. Major General Urquhart, who led 1 British Airborne for the last time to help liberate Norway at the end of the war, blamed the failure at Arnhem partly on the choice of landing sites too far from the bridges, and partly on his own conduct on the first day. Lieutenant General Browning's report blamed XXX Corps' underestimation of the strength of German resistance and its slowness moving up Hell's Highway, along with the weather, his own communications staff and 2nd Tactical Air Force for failing to provide air support. He also succeeded in getting Major General Sosabowski dismissed from command of 1st Polish Parachute Brigade for his increasingly hostile attitude.

Field Marshal Montgomery's immediate reaction to *Market Garden* was to blame Lieutenant General O'Connor for failing to deliver his expected miracle. On 28 September Montgomery recommended that Browning should replace O'Connor commanding VIII Corps, and Urquhart should replace Browning. In fact, Browning left England in November, having been appointed Chief of Staff to his old patron, Admiral Lord Louis Mountbatten, now heading South-East Asia Command. He rose no higher in the army but became Comptroller of the Royal Household after the war. O'Connor left VIII Corps voluntarily in November 1944, having been promoted to command Eastern Army in India.

On further reflection, Montgomery blamed himself for part of the failure of *Market Garden*, and Eisenhower for the rest. He also argued that the salient along Hell's Highway provided a base for the attacks eastward across the Rhine in 1945, describing *Market Garden* as 90 per cent successful. Again, in Montgomery's own terms this was true, since the battle had forced Bradley to redeploy First US Army northwards and halt Patton. But, in October, Bradley placed Ninth US Army in charge of XIX Corps on the boundary with 21st Army Group, leaving First US Army with two Army Corps grouped around Aachen and a single Army Corps over-extended through the Ardennes forest to keep touch with Third US Army, which resumed its own attacks eastward in November. On 16 December the Germans took advantage of this error in deployment to launch their offensive through the Ardennes. The direct legacy of the battle of Arnhem was the Battle of the Bulge. On 28 December, Lieutenant General Horrocks, whose XXX Corps was being committed to the battle to support the Americans, suffered another collapse. Montgomery continued to protect Horrocks, sending him home to rest before returning him to XXX Corps for the final victory.

The next major Allied airborne operation, and the last of World War II, sought to rectify the faults evident in *Market Garden*. In Operation *Varsity* on 24 March 1945, 1,696 aircraft and gliders landed 21,680 troops of US XVIII Airborne Corps under Lieutenant General Ridgway (17th US Airborne Division and 6th British Airborne Division), east of the Rhine as part of a river crossing by British XII Corps near Wesel. The whole airborne force landed in two hours barely 5 miles (8km) ahead of XII Corps, which made contact on the same day. To the end of the war, *Market Garden* remained the only attempt by the Allies to use large airborne forces in deep penetration in Europe.

CONCLUSION

Gordon L. Rottman

An assessment of airborne operations

The many airborne operations executed by the principal belligerents were of mixed success, from failures to highly successful. Detractors can easily find faults to criticize; but it can be demonstrated that when properly organized, equipped and trained, supported by adequate aviation assets, intelligence and mission planning, and employed realistically, airborne forces had a major impact on overall operations.

They were seldom misused, with the exception of units sometimes wasted away by being kept in prolonged ground combat. However, they did on occasion suffer excessive casualties; fail to completely accomplish all their missions, or require additional time to complete them; and – on a small number of occasions – they simply failed in their mission. While enemy action was of course responsible for high casualty rates, the very nature of airborne operations – their reliance on the timely and closely concentrated landing of troops and on weather conditions, and their landing scattered among the enemy – contributed to the sometimes high losses. Lack of solid intelligence, difficult to obtain from behind enemy lines, was another contributor.

The scattered landings of paratroopers and glider men in some early operations, especially at night, were a main source of criticism. While this did hamper mission accomplishment, it also proved to be valuable in confusing and disorganizing the enemy. It was not so much a flaw in airborne tactics, but simply reflected the limitations of period aircraft capacity, navigation capabilities and aircrew training. The problem was countered by conducting daylight operations, and by improved aircrew training.

The limited feasible depth and duration of airborne operations behind enemy lines was another unavoidable factor due to constraints on manpower, firepower and resupply capabilities. Airborne troops could only operate effectively behind enemy lines for three to five days without substantial support and resupply. Eventually this limitation was fully appreciated, and more realistic goals and missions were assigned.

Most capabilities improved throughout the war, but one on which a high reliance had been placed proved more or less unimprovable: the glider. There were a number of successful glider operations at both small and large scale; but gliders were not utilized to the extent originally anticipated, and glider training dwindled after the war. The US Army re-designated and re-organized the distinct parachute and glider infantry regiments as 'airborne' infantry regiments in 1947/48, requiring them to be dual-capable, but little actual glider training was undertaken; it ceased altogether in 1949, and was officially dropped as a requirement on 1 January 1953. The British retained gliders on a limited scale until 1957, and the Soviets ceased their use in about 1959. None were employed operationally after World War II, and in time helicopters took over their role. Some have suggested that parachute troops too are unnecessary today; but a helicopter cannot fly half way around the world and insert large numbers of troops in an enemy-controlled area.

The legacy left by World War II airborne forces provides another viable capability to exploit the enemy's weaknesses. Most of the limitations experienced by World War II airborne forces have been eliminated or greatly reduced by long-range, high-capacity transports; the capability to airdrop heavy loads of equipment and supplies; improved intelligence collection capabilities; and advanced navigation and communications. These advances have so drastically increased the capabilities of airborne forces that the study of their World War II predecessors, while still important, has only a limited relevance to today's forces. However, the traditions of daring and self-reliance established by World War II airborne forces have undoubtedly helped make today's airborne units what they are.

Ground combat: US paratroopers take cover in a ditch at St Saveur-le-Vicomte in Normandy, with a shot-up German truck in the background. This photo was taken on 11 July 1944 – D+35. Holding airborne units in the line to fight as conventional infantry, long after they had completed the assault for which they were configured and equipped, was a wasteful use of this special asset.

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'A stream of possibilities rushes through your mind.
Will your 'chute open? Will your landing be a good one,
or will you hit a tree, or a house, or break a leg ... Will the
enemy be firing across the dropping zone? ... If the
answers to all these doubts proved favourable, then
only the battle would lie ahead.'

Company Commander Major Victor Dover, recalling
the approach to Arnhem in his memoirs, The Silken Canopy

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